INVESTIGATING AN ONLINE COMMUNITY OF SELF-DIRECTED LANGUAGE LEARNERS AT THE MIXXER

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Shuya Xu

INVESTIGATING AN ONLINE COMMUNITY OF SELF-DIRECTED LANGUAGE LEARNERS AT THE MIXXER

The present study investigated The Mixxer language exchange site (https://www.language-exchanges.org/) as a typical informal online community of self-directed language learners with a focus on how learners interact with each other. Learners' perception was also studied regarding how their language learning was impacted by their participation in the community.

An exploratory sequential mixed methods design was adopted for this work. Data collection started with the iterative feature analysis of The Mixxer website and document analysis of website posts and records, along with an interview with the website administrator. Eight English learners and eight native speakers of English were then interviewed regarding their language learning experiences at The Mixxer after an initial understanding of The Mixxer environment was obtained. Data from interviews with learners were analyzed thematically to inform the development of the survey questionnaire for the last stage of data collection. During the last phase, a survey was distributed to over 12,000 users of The Mixxer. Importantly, more than 500 total responses were received. Of that total, 396 responses were analyzed in SPSS and MS Excel to reveal the interaction patterns and related experiences of all learners at The Mixxer.

Analysis results showed that learners conducted conversational language exchange and writing corrections at The Mixxer. The user profile and search system as well as the messaging/chat tool of The Mixxer facilitated the connection of language partners. Learners used Skype or other communication tools to meet with their partners. Meanwhile, a smaller group of learners engaged in writing correction activities in the forum-style Writing section of The

Mixxer.

The Mixxer learners had one to four language partners on average. Among the 71.21% learners who had language exchange experiences at The Mixxer, they typically had one to four 31- to 60-minute exchanges each month. Ordinary learners attempted to arrange equal language practice opportunities for both parties during the exchange. They liked to chat casually with partners, ask each other questions, and teach basic knowledge of the language. They also corrected each other's mistakes or gave other types of feedback. Some other learners had more structured activities for their language exchange engagement, such as reviewing different types of learning materials together or designing meaningful activities for language practice. Learner's preferences of language partners were also discussed.

Analysis of qualitative and quantitative data with the Community of Inquiry (CoI) framework suggested a strong social presence in The Mixxer community with a variety of indicators and examples. Cognitive presence was identified from learners' regular language input and output practices during the exchange. Teaching presence in The Mixxer community was largely performed by learners themselves in the categories of design and organization and direct instruction. Evidence was also found for learning presence that effectively extended the CoI framework suggested by Shea and Bidjerano (2010, 2012).

In addition, an inspection of learners' perceived impact of their Mixxer experience, reflected many benefits of conducting language exchange in this community, such as the opportunities to practice the language with native speakers, improvement of language skills, and motivation for continued language learning. A series of challenges were also reported by The Mixxer learners, including time-scheduling issues, unstable Internet connections, difficulty in finding a partner, and so forth. Other language learning efforts were also studied for a better

understanding of the role that participation in The Mixxer community played in learners' entire language learning endeavors.

The interactive relationships between learning context, learners' self-directed learning (SDL) attributes, and SDL processes were exemplified in the present study. Improvements to Song and Hill's (2007) SDL model were proposed by incorporating CoI components.

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CHAPTER 1

INTRODUCTION

People constantly learn throughout their lives. Learning helps us grow from an infant who is not even able to talk into an adult who can live, communicate, produce value, pursue self-actualization, and continue to learn in a more purposeful, self-directed manner. By virtue of the widespread access to Web technology today, our self-directed learning (SDL) is highly convenient and efficient (Sze-yeng & Hussain, 2010), be it for academic purposes, professional development, household work, or personal interest. As an example, I learned much more about research methods via the Internet after taking basic inquiry courses during my doctoral studies. I also learned about gardening by searching for tutorials online, whereas my husband successfully developed new skills in fishing by watching YouTube videos and learning from friends. These types of learning activities are highly self-directed and are all driven by our internal needs or interests. In effect, we define the topic and extent to which we want to learn. We locate the resources that suit our learning needs from the abundant information on the Internet and in our surroundings. Finally, it is us as learners who determine whether we have reached our learning goals and when it is the time to wrap up.

As a former English as a foreign language (EFL) learner and now as an English as a second language (ESL) learner, I have long been engaged in language learning activities, both formally through enrollment in classes and informally studying on my own. Further, I have tested numerous technology tools for language learning. In the process, I have heard of both successful stories and unpleasant experiences from friends and other people who utilized technologies for their self-directed language learning. On the one hand, there are a myriad of technology products available that claim to enhance one's experience of learning a language in a

self-directed fashion. Some of these technologies show great benefits and potential for language learners, whereas others seem to be counterproductive and not aligned with effective ways of how people learn.

On the other hand, an enormous amount of research has been conducted on the topics of self-directed and online language learning. Although the self-directedness of learning occurs in both formal school settings and informal contexts outside the classroom (Hiemstra, 1994; Owen, 2002), the available empirical research tends to have taken place more often in school settings than in informal self-directed online learning environments (detailed in Chapter 2). Moreover, available research in the context of informal self-directed online learning is inclined to be descriptive and exploratory. The status quo of current research suggests that: (1) additional empirical research is needed to explore the informal self-directed online language learning experiences; and (2) research designs must go beyond the description of "what" phenomena to provide inferential explanations for the "how" questions. Given this gap in the research, this dissertation takes a mixed methods approach with the hope of capturing the patterns of learner interactions in an online community, as well as the impacts of community participation on individuals' language learning.

Background of the Study

Numerous language learning communities have been built and utilized online. Some are world-wide language learning websites, such as BBC Learning English and LiveMocha. Millions of motivated learners seek specific language learning opportunities at such websites. Some are smaller communities, where people study a second or foreign language via learning management systems, videoconferencing, blogs, or other computer-mediated communication tools. These online learning communities are often established to supplement face-to-face language classes.

Language learning even happens in online environments that were originally created for entertainment purposes, such as Second Life.

Among the preceding examples, The Mixxer community (located at http://www.language-exchanges.org/) is a typical example of an online language learning community that allows language learners to connect with each other for language exchange (i.e., one learns one or more languages from a partner and, in return, teaches the language(s) one speaks to the partner). Learners can register an account at The Mixxer and introduce both their native language and the language they are currently learning. Once they become a member of the website, they can search for profiles of other users and contact those who match their learning interests to form a language learning partnership. Language partners are able to communicate via Skype to practice speaking. They are also encouraged to share their writing with their partner for corrections and feedback. In addition, The Mixxer supports classroom-based language exchange by pairing up classes in different countries or by creating an event sign-up platform where individual native speakers of a language volunteer to connect with a class at a certain time. With this high level of interaction (e.g., frequent oral and written communications) between learners, The Mixxer appears to be an ideal site for this dissertation to investigate questions about online language learning communities.

It is important to point out that this dissertation only studies the self-directed language exchange community at The Mixxer in which individual learners are the primary participants, as opposed to the classroom-based language exchange activities. Although the classroom-based language exchange community at The Mixxer may offer various interesting topics for research, it is not the focus of this dissertation.

Purpose of the Study and Research Questions

Language is inseparable from social interactions (Reese, 2007); in other words, social interactions play a pivotal role in language learning. When it applies to the informal self-directed online language learning context, however, the "what" and "how" aspects of this claim remain a vague picture. Various frameworks are available to explain different facets of "what" constitutes an online learning community. The major ones include the community of practice framework from Lave and Wenger (1991), the Community of Inquiry (CoI) model from Garrison and colleagues (Garrison, 2007; Garrison, Anderson, & Archer, 2000), and the SDL model for online contexts from Song and Hill (2007), which are further described in Chapter 2. These models were generated for broader contexts than the focus of this dissertation. Whether they address this specific context of informal self-directed online language learning needs to be examined.

Research has begun to shed light on the "how" aspect of language learning in online communities, as well. Certain scholars have discovered that the quality of learners' interactions with the teacher and peers affects their motivation (Wigfield, Eccles & Rodriguez, 1998, as cited in Sze-yeng & Hussain, 2010). Online communities were found to benefit language learning with increased language input and output (Jee & Park , 2009; Mouhadjer, 2013; Wu, 2012) and convenient access to valuable resources (Cai & Zhu, 2012). Social interactions in the community facilitate constructive learning (Black, 2005; Mouhadjer, 2013; Jee & Park, 2009; Olthouse & Miller, 2012; Reese, 2007) and nurture learners' cultural awareness (Jee & Park, 2009; Mouhadjer, 2013). Again, these studies were associated with broader or slightly different contexts than the focal point of this dissertation. The concentration of such research indicates that there is a need to conduct additional work within an informal self-directed online language learning community, like The Mixxer.

This dissertation aims to examine the details of social interactions among self-directed language learners in The Mixxer online community at http://www.language-exchanges.org/. More importantly, it is expected to uncover the specifics of how such interactions affect one's language learning. The following are the research questions that this dissertation attempts to answer:

1. What features of the website support interactions between self-directed learners in The Mixxer language learning community?
2. What are the patterns of interactions between self-directed language learners in The Mixxer community, in terms of the frequency and styles of interactions, and the role of each learner within such interactions?
3. What format do social presence, cognitive presence, and teaching presence take in this informal self-directed language learning context at The Mixxer?
4. How do learners perceive the impact of participation in the community on their self-directed language learning?

Significance of the Study

The findings of this dissertation are expected to make contributions from several perspectives. First of all, the findings from this case of an informal self-directed online language learning community provide empirical evidence for existing theories and frameworks of self-directed learning, online learning communities, and online learning interactions. These findings might also facilitate the improvement or revision of these theories. The application of broader self-directed learning and community theories in this special context will be assessed. In particular, this dissertation is concerned with discovering the format of teaching presence from the CoI model in an informal self-directed language learning context, wherein an instructor role

is often absent. In addition, implications are drawn for instructional designers or online learning service providers regarding the design of online communities for self-directed language learners. It also provides guidance for self-directed language learners with selection criteria when they are in an effort to locate resources to meet their own learning needs and strategies that aid their language learning process.

CHAPTER 2

LITERATURE REVIEW

Self-Directed Learning

Definition and General Characteristics

Self-directed learning (SDL) is a vital aspect of adult learning in the twenty-first century. In SDL, learners take control of the goals, learning materials, methods, and evaluation of learning outcomes (Brockett & Hiemstra, 1991, as cited in Owen 2002; Hiemstra, 1994; Knowles, 1975, as cited in Owen 2002). Such learning processes can happen in both formal and informal settings, with or without the existence of an instructor. SDL is also viewed as a personal characteristic that represents one's capacity to be self-directed during the learning process (Merriam, 2001). Self-direction is not an either/or notion – it is rather a continuum whereby learners demonstrate varying degrees of willingness to take responsibility for their own learning (Hiemstra, 1994; Owen, 2002). Self-direction also varies among different learning situations; that is, an individual could show more self-directedness in one learning situation over another (Hiemstra, 1994). In fact, according to Avdal's (2012) survey study with over 200 nursing students at Dokuz Eylul University and El-Gilany's (2013) investigation with Saudi undergraduate nursing students, the SDL capability is found to be positively correlated to individual's learning achievements. Learner's self-efficacy with regards to their SDL capability shows a positive correlation with learning achievements, as well (Li, Tancredi, Co, & West, 2010).

Garrison (1997) proposes that the SDL process is influenced by three factors: (1) self-management; (2) self-monitoring; and (3) motivation. The self-management dimension involves the enactment of learning goals and management of resources. Self-monitoring is related to the

learner's cognitive and meta-cognitive processes. It enables the learner to organize new and prior knowledge in a meaningful manner and reach the learning objective through critical reflection. Motivation, last but not least, helps the learner initiate and maintain learning efforts.

More than a decade after it was proposed by Garrison, Adb-El-Fattah (2010) adapted a questionnaire from existing instruments to measure the three constructs of Garrison's (1997) SDL model. The questionnaire was distributed to 119 undergraduate students in Egypt. Adb-El-Fattah's (2010) findings indicated the inter-relationship between self-management, self-monitoring and motivation. Specifically, motivation was a mediator between self-management and self-monitoring. In addition, self-management and self-monitoring were found to significantly predict learning achievements.

Thanks to the vast amount of information and resources that are available, much of people's learning today is shifting towards informality and self-directedness (Bonk, Kim, & Xu, 2016; Livingstone, 1999). On many occasions, an instructor is no longer necessary for an individual's learning. The aforementioned empirical studies on SDL (Adb-El-Fattah, 2010; Avdal, 2012; El-Gilany, 2013; Li et al., 2010) recruited student participants from formal learning settings, and investigated the relationship between students' SDL characteristics and their academic performance. It is equally important and interesting to evaluate the various aspects of SDL in informal settings. However, the number of such studies is distinctively falling behind those related to formal SDL practices, which will be further revealed in the remaining review of literature.

In an informal SDL context, the use of autonomous learning strategies becomes vitally important as they enable the learner to complete tasks such as planning and evaluating, which are usually performed by an instructor in formal settings (Bouchard, 2009). Bouchard (2009)

discussed four dimensions of learner's autonomous learning strategies. The first two are the algorithmic and conative dimensions. The algorithmic dimension covers the procedures of SDL, including the formulation and pacing of learning goals, sequencing of learning materials, finding resources, and evaluation during the learning process. The conative dimension is related to psychological factors (e.g., motivation) and contextual factors (e.g., past experiences and social environment). The third and fourth dimensions, semiotics and economics, emerge from the online learning environment. The semiotics dimension is in line with the multimodal literacy notion, namely, the knowledge representation and meaning-making in different media formats (e.g., electronic whiteboards, hypertext, video). The economics dimension, as indicated by its name, concerns the "perceived cost-benefit ratio and opportunity costs" (Bouchard, 2009, p. 18).

Self-Directed Learning in Online Environments

Being a self-directed learner does not mean that learning takes place in isolation (Hiemstra, 1994). Environment, particularly the interaction between the learner and the environment, plays a non-negligible role in the process (Owen, 2002). Taking the learning context into full consideration, Song and Hill (2007) developed a research-based framework to depict the SDL process that occurs in an online environment (see Figure 1). Self-directed learning is reflected as both a learning process and personal attribute in this model. Personal attributes encompass the learner motivation aspect of Garrison's (1997) model and the learner's SDL capacity. It also includes the learner's use of resources and strategies. The learning process involves the planning, monitoring, and evaluation of one's SDL. It is important to highlight that the learning process dimension and personal attributes dimension exhibit an interactive relationship in Song and Hill's (2007) model. The process of planning, monitoring, and evaluating one's SDL relies on the learner's use of resources and strategies. Learner's motivation

initiates and maintains one's SDL effort, similar to what Garrison (1997) described in his three-dimensional SDL model. In addition, learner's involvement in SDL helps enhance their SDL capacities as personal attributes.

The learning context, as the third major dimension in Song and Hill's (2007) model, influences the whole learning process as well as the requirements for learner's SDL capacity. Contextual factors include design elements and support elements. The former refers to the available resources, structure of the course, and nature of tasks. The latter varies from instructor feedback to peer input from collaboration and communication.

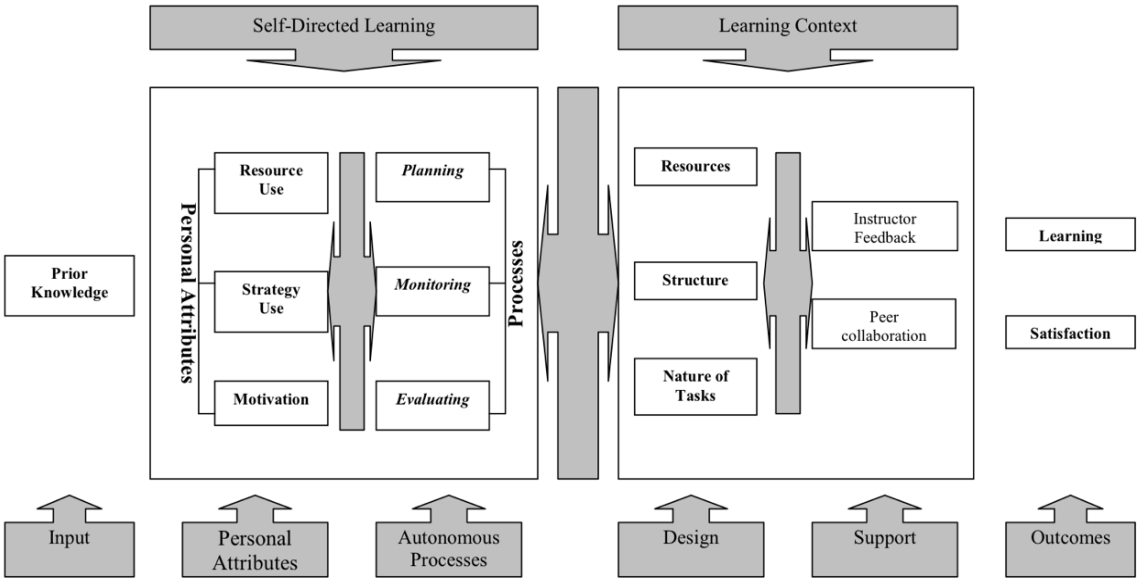

Figure 1. A conceptual model for understanding Self-Directed Learning (Song & Hill, 2007, p. 31).

Bouchard's (2009) four dimensions of SDL autonomous learning strategies is also supported by evidence from online learning environments. Based on Bouchard's (2009) framework, Kop and Fournier (2010) analyzed learners' participation in a Massive Open Online Course (MOOC) environment. They surveyed and interviewed the participants in the Personal

Learning Environments, Networks, and Knowledge (PLENK) course, and observed their behaviors. Kop and Fournier (2010) determined that the four dimensions, (1) algorithmic, (2) conative, (3) semiotic, and (4) economic factors, all affected learners' levels and patterns of participation in the course. With respect to the conative dimension, learners with prior MOOC participation experience demonstrated higher levels of engagement. These experienced learners motivated novice learners by sharing relevant resources. The existence of experts in the field was a motivating factor for some learners, whereas it inhibited other learners' participation owing to the power relations and lack of confidence. Algorithmic factors noted in the PLENK course included time management, goal setting, and time availability. The semiotic dimension was represented by the different ways in which participants aggregated information. From the economic perspective, participants highly valued the knowledge and resources they attained from the course.

Interestingly, Kop and Fournier (2010) also established that learners in PLENK were overwhelmed by the abundant resources and communication tasks at the beginning of the course, but developed coping strategies afterwards. This last point from Kop and Fournier (2010) is supported by Sze-yeng and Hussain's (2010) results from a blended learning environment. Sze-yeng and Hussain (2010) designed an online socio-constructivist learning environment to supplement a graduate-level instructional design and development course, seeking to promote participants' self-directed learning. The two researchers observed participants behaviors, analyzed relevant documents, and conducted interviews. Their analysis showed a steep "self-directed learning curve" (Sze-yeng & Hussain, 2010, p. 1915). The learners struggled in the beginning to switch to an autonomous SDL style from the direct lecturing methods they were used to. With support from the online learning community, learners were able to adapt to the new

environment and develop their own SDL skills.

Recently, Bonk, Lee, Kou, Xu, and Sheu (2015) carried out a large-scale study to further explore learner's SDL experiences in informal online settings. As part of this research, a Web-based survey was distributed to MIT OpenCourseWare (OCW) subscribers and received 1,429 responses. The survey investigated the preferences, goals, achievements, and challenges that participants encountered in their informal self-directed online learning experiences. Their findings suggested that most participants engage in SDL activities at home with a laptop or desktop computer. Self-directed learners are primarily motivated by intrinsic factors, such as curiosity, interest, and the need for self-improvement or professional development. Participants identified freedom to learn as the major factor that leads to their success in self-directed online learning. The sense of resource abundance, choice, learner control, etc., are other important elements of success. These factors are consistent with what Kop and Fournier (2010) reported as motivating factors underlying PLENK learners' opinions.

In terms of SDL goals, Bonk et al. (2015) put forth that most participants expected to gain a new skill or competency when engaged in SDL. Participants also expressed their desire to better their own lives, help others or the society, or simply fix things at home by learning online in a self-directed manner. Not surprisingly, participants reported gaining new knowledge after their SDL activities. More interestingly, over 60% of learners felt their identity as a learner had been enhanced as a result of their SDL participation. Such results align with Song and Hill's (2007) claim that learner's involvement in SDL helps improve their SDL capacities (i.e., personal attributes). Other than the achievements and exciting life-change moments, self-directed online learners also met obstacles and challenges (Bonk et al., 2015). Learners noted that a lack of time inhibited their learning. Membership or technology fees along with the lack of high-

quality open resources also caused difficulties when they were trying to utilize online resources for their informal SDL. Following these major challenges are factors like technical difficulties and lack of environmental support to learn in a self-directed or informal manner.

With a focus on SDL as personal attributes, Kim, Olfman, Ryan, and Eryilmaz (2014) designed a personalized course on the MediaWiki online collaboration platform to cultivate learners' SDL abilities. The course requires students to perform five SDL tasks: (1) establish learning goals; (2) find resources; (3) implement learning activities; (4) monitor and evaluate their own performance; and (5) reassess learning strategies. Students have the option to share their posts with the entire class. Further, they are able to communicate with each other in various channels and are also allowed to customize their homepage to share more information about themselves. In this experimental study, students in the experiment group completed the online course section with the SDL feature-enhanced MediaWiki, whereas the control group used a regular MediaWiki section without SDL features. Caffarella and Caffarella's (1986, as cited in Kim et al., 2014) Self-Directed Learning Competencies Self-Appraisal Form (SDLCSAF) was adapted to measure students' perceived SDL competency. Pre-test and post-test results indicated that students' SDL abilities were upgraded after taking the course that actively guides students to self-direct their own learning with collaboration opportunities.

Taking a similar experimental approach, Lai, Shum, and Tian (2016) examined the effects of an SDL intervention program on learners' self-directed use of technology for language learning. The SDL-enhanced online language learning program was designed with the first module intended to motivate learners for SDL and with goal-setting, strategic planning, and reflection and self-monitoring steps along with the language learning modules. Under the supervision of an instructor, the program was implemented with 64 undergraduate EFL learners

for 12 weeks. Pre-training and post-training surveys were carried out with participants to collect learners' demographic data, learner perceptions and self-reported behaviors of self-directed language learning with technology, and possible key influencing factors. A comparison of frequent users of this program with less frequent users demonstrated that this training program successfully improved learners' use of technology for language learning and enhanced learners' SDL awareness and capabilities.

It is worth noting that most of the empirical studies on online self-directed learning were conducted in formal instructor-led learning environments, either blended or fully online. They shed light on various aspects of SDL, such as new dimensions of SDL in online environments and the potential of assisting students to develop personal SDL skills. However, it is reasonable to assume that informal self-directed online learners may have different learning experiences without support from an instructor – informal learners need to perform tasks such as the planning and evaluation of their own learning instead of relying on the instructor to design the course, select materials, or perform learning assessment (Bouchard, 2009). There has been only a single study from Bonk et al. (2015) among the reviewed literature that concentrated on the informal SDL context. This exploratory study revealed learners' preferences, goals, achievements, and challenges when they engaged in informal self-directed learning online. These interesting results raise more questions and call for more in-depth research regarding the diverse learning processes exhibited in the informal context.

Theories of Learning Community

Community of Practice

As a founding element of cognitive and constructivist learning theories, the community of practice framework has been prevalent for over two decades. Lave and Wenger (1991)

proposed the constructs of legitimate peripheral participation (LPP) and community of practice that constitute their situated learning theory with inspiration from traditional apprenticeships in various professions. In Lave and Wenger's (1991) view, learning is not only situated in practice, but rather is "an integral part of generative social practice in the lived-in world" (From Situated Learning to Legitimate Peripheral Participation, para. 1). Community of practice exists in all disciplinary and professional systems wherein "participants share understandings concerning what they are doing and what that means in their lives and for their communities" ("The Place of Knowledge," para. 6).

Through LPP, newcomers gain an overview of the specifics of the practice of the community and define their own learning curriculum thereafter. Their ultimate learning goal is to become full participants in the community of practice. They obtain such status not by simply observing and imitating the behaviors of masters and old-timers. Instead, they engage in trivial tasks at the beginning and gradually gain the ability to perform more and more tasks. What newcomers have learned is greater than observable behaviors – they develop an identity as a full practitioner within the community. During this process, the master serves as a resource that exemplifies a full practitioner and offers help, as opposed to a teacher who provides directive instructions. It is a process that moves away from the focus on teaching to an ideal, immersed learning journey. A newcomer's growth into full participation indicates the reproduction of the community of practice (Lave and Wenger's, 1991).

An online community appears to be a natural habitat for constructive learning. Online interaction "engages participants in an interactive process which leads to the collaborative construction of knowledge, rather than the traditional transfer of information from one to the other" (Mouhadjer, 2013, p. 30). Second language acquisition is thus facilitated through

language input, output, and the associated processes of meaning negotiation (Jee & Park, 2009). A community of practice is often evident in the online learning environment. In some cases, advanced learners play the role of a peer mentor, and even facilitator and organizer (You & Zhang, 2010). Novice learners are then able to learn from experts through practicing, collaborating, and modeling other than explicit teaching (Olthouse & Miller, 2012). Peer review practice is spontaneously initiated in certain online communities. It not only motivates learners with a sense of audience and belonging, but such peer review also serves as a scaffolding, of sorts, for newcomers, and fosters participation by encouraging newcomers to start with reviewing others' work, requiring less language capabilities (Black, 2005).

Community of Inquiry

Unlike the community of practice theory that explains the learning process from the perspective of individual roles, the Community of Inquiry (CoI) framework focuses more on the details and functions of the discourse within a learning community.

The CoI framework (Garrison, 2007; Garrison et al., 2000) emerged from learning in computer-mediated communication (CMC) contexts. Garrison and cohorts believed that if a CMC environment is expected to promote deep and meaningful learning, it must fulfill three elements: (1) cognitive presence; (2) social presence; and (3) teaching presence (see Figure 2).

Cognitive presence represents the learning process wherein learners are triggered by a sense of dissonance or puzzlement, followed by "exploration, construction, resolution and confirmation of understanding through collaboration and reflection in a community of inquiry" (Garrison, 2007, p.65). The CoI framework claims that learners' cognitive development during critical inquiry commences from a triggering event that aids them in recognizing the problem and perhaps become motivated via the sense of puzzlement. Learners then explore the information

and resources with the goal of making sense of the problem. After the exploration activity, learners are able to integrate the information and knowledge into their own knowledge system. Finally, learners reach the resolution stage when they solve the problem.

Social presence is defined as "the ability of participants in a community of inquiry to project themselves socially and emotionally, as 'real' people (i.e., their full personality), through the medium of communication being used (Garrison et al., 2000, p. 94)." It includes the establishment of socio-emotional presence and personal relationships, as well as intellectual focus and respect. Learners' social presence in the community of inquiry is presented as emotional expression, open communication, and group cohesion. Humor and self-disclosure are two examples of emotional expression that can decrease social distance and establish mutual trust. Open communication can be achieved by mutual awareness (i.e., attend to others' messages) and recognition of each other's contributions. Group cohesion, or group commitment, is facilitated by collaborative communication and empathy.

Teaching presence consists of three categories – design, facilitation, and direct instruction. The design category, also dubbed instructional management, concerns the instructional design of the learning process such as the curriculum, teaching strategies, assessment, procedures, time frame, and use of the medium. Facilitation, in comparison with direct instruction, "supports dialogue with minimal shaping of the course of the discussion" (Garrison, 2007, p. 67). The instructor or an equivalent role facilitates the community discussion in a manner that fosters mutual understanding, balanced participation, and educational transaction. Direct instruction is more concerned with conveying the discourse of a discipline to learners through the presentation of contents, answering questions, proactive scaffolding, and feedback. With appropriate levels of social presence and teaching presence, learners within the

community of inquiry are able to attain the desired level of cognitive presence.

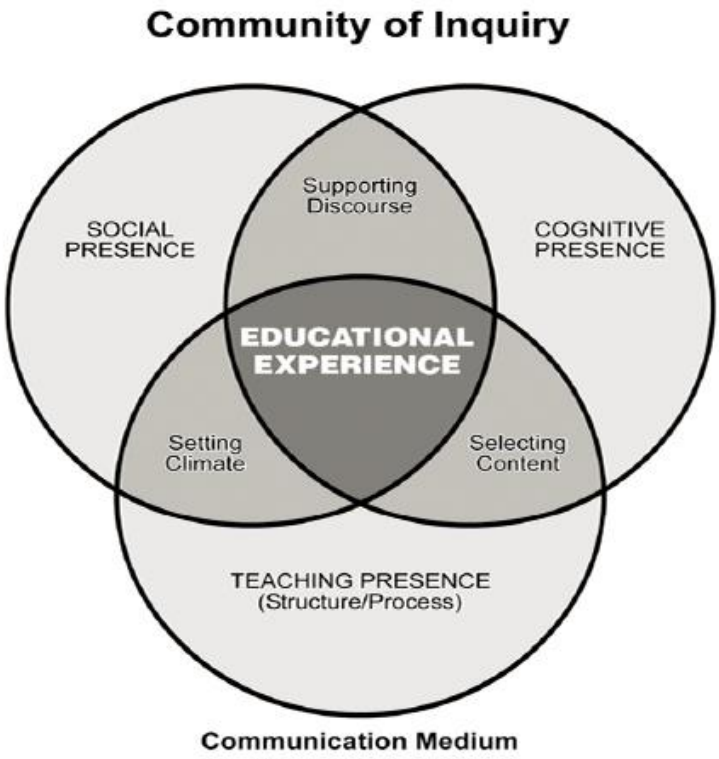

Figure 2. Community of Inquiry framework (Garrison, 2007, p. 62).

Following the publication of the CoI framework, numerous research studies have utilized it to analyze the activities in an online or blended learning environment. These empirical studies have examined the reliability and validity of the framework, and helped polish its constituent details. For instance, recent studies from Shea and Bidjerano (2010, 2012) led to the proposition of a new construct for the CoI model, namely, learning presence. Apart from the social, cognitive, and teaching presences that focus on observable behaviors in the community, learning presence provides a supplementary lens through which to uncover the individual attributes shown as another influencing factor in the community of inquiry. Shea and Bidjerano (2010, 2012) analyzed cognitive, social, and teaching presence in online and blended learning environments with over 3,000 students, and measured their self-regulation skills with the online

self-regulated learning questionnaire (Barnard, Paton, & Lan, 2008; Lan, Bremer, Stenvens, and Mullen, 2004, as cited in Shea & Bidjerano, 2012). Their results indicated that self-regulated learning skills, proposed as learning presence, is another important element influencing the level of cognitive presence in a community of inquiry. More specifically, when social presence and teaching presence are at low levels, whether or not the learner can achieve high cognitive presence likely depends on the learner's self-regulated learning skills.

Again, Shea and Bidjerano's studies investigated formal online learning activities. Their findings raise questions surrounding the application of the CoI model in informal settings. For instance, what formats do social presence, teaching presence, and cognitive presence take on in the informal language learning context that this dissertation focuses on? Are any of the three CoI presences at a particularly high or low level? What are the possible relationships between these three presences? Could the notion of learning presence find more evidence from informal language learning contexts with a higher level of self-directedness, such as at The Mixxer, as compared to environments with a lower level of self-directedness?

This dissertation will contribute to addressing these questions based on cases from The Mixxer online community.

Online Community for Language Learning

Definition of Online Learning Community

Community, as defined by several common dictionaries, refers to a group of people who live in the same area or people who are unified by the same characteristics or interests. Accordingly, an online learning community refers to a group of people who share similar learning goals or interests and are connected to each other in an online environment. Ludwig-Hardman (2003) emphasized the collaborative interactions among community members:

"An online learning community is a group of people, connected via technology-mediated communication, who actively engage one another in collaborative learner-centered activities to intentionally foster the creation of knowledge, while sharing a number of values and practices, including diversity, mutual appropriation, and progressive discourse" (Ludwig-Hardman, 2003, p. iv).

Instead of providing a descriptive definition, Rovai (2002) identified four dimensions of a classroom community. These dimensions include (1) spirit, (2) trust, (3) interaction, and (4) learning as common expectations. Spirit refers to the recognition of membership and sense of belonging. The trust dimension involves the learner's willingness to trust other members. The interaction dimension is a requisite for an online learning community. The last dimension, common expectations, means the commitment to learning as a common goal.

Language and Cultural / Social Practices

While self-directed learners benefit from the abundant resources and support provided by online learning communities, such an interactive environment demonstrates more affordances for those who particularly focus on language learning. The idea behind this claim comes from the intimate relationship between language, language learning, and human social practices.

Hart (2012) examined the speech and other interactions of learners within an online learning community where they attended regular instructor-led conversation lessons to prepare for the oral part of an international English language proficiency exam. Her study determined the norms underlying the interactions between learners and instructors. Such norms included that learners should speak English in an organized, succinct, nature, and spontaneous way. In addition, instructors should provide open and honest feedback to their students. At the same time, students should reciprocate in their own communication. Finally, learners should be

proactive and maintain a positive attitude with respect to their English language learning, while the instructor should positively support the learners. These speech codes, as claimed by Hart (2012), reflect cultural practices, because "students are learning much more than language or grammar – they are learning how to be (or at least how to emulate) a particular type of person in the world" (p. 228 – 229), namely, the native English speaker and the culture they possess.

This point of view was bolstered by the observations of Chang (2010). In a blended ESL class in a community college, Chang (2010) found that the academic discourse was dominating the ESL class. It was conveyed and emphasized to students that academic capability and performance is highly valued in American college classrooms. Instead of the general English language, students are learning "an academic social language, which consists of not only certain kinds of stylistic genres, syntactic structures, and vocabulary, but also a particular thinking model that is assumed to represent the writing of the U.S. academy" (p. 237). They are also expected to be students who are participatory and enthusiastic, as valued in American classrooms. In this sense, students were expected to become full participants of the target language community; on the contrary, evidence showed that students did not always reach such goals. Chang (2010) established that students did not passively assimilate the values and thinking models imposed by their teacher into their own approaches. Instead, they attempted to accommodate the norms and cultural practices of their first language when learning in the ESL class. The online forum that the ESL class used to complement face-to-face class meetings became a major venue where students were able to express their multiple identities.

While these two cases took place in formal classroom settings, Reese (2007) investigated the interactions between English language learners (ELLs) and native English speakers in an online text-based game environment. His results indicated that the ELLs learned English by

observing and internalizing others' language practices. Their virtual identities were also developed during this process of internalization and construction. The identity, in turn, reflects and influences the way they interact with the community (Harrison & Thomas, 2009; Reese, 2007).

As to the relationship between language and cultural /social practices, Reese (2007) proposed two possible explanations. The first view considers social interaction as an influencing factor that shapes the ways we communicate. The second view considers language as part of our cultural practices.

These studies suggest that the learning of a language involves not only linguistic contents, but also the cultural or social practices associated with the people who speak that language. Simultaneously, the cultural norms and values of learners' first language should play a role in their language learning process, as well. Pahl and Rowsell (2012) claimed that "the more agency we give to students, the more they learn" (Introduction section, para. 6). In other words, learner's prior knowledge and experiences should be respected and utilized in their language learning. The learning community can provide learners with access to the culture of the target language and promotes learning of the culture through interactions between language learners and native speakers; it can also offer a space for learners to explore, establish, and express their own identities – to make meanings from interactions.

Instructional Affordances of Online Community

The research being reviewed here overall is positive towards the effect of an online community on language learning. Online communities have been seen to benefit language learning by increasing language input and output (Jee & Park, 2009; Mouhadjer, 2013; Wu, 2012). It also motivates learners with a sense of audience and belonging, retaining learners'

intrinsic interest (Black, 2005; Cai & Zhu, 2012; Gibby, 2007; Jee & Park, 2009; Olthouse & Miller, 2012). Still, others have found that online communities for language learning supply access to valuable resources (Cai & Zhu, 2012) and facilitate constructive learning (Black, 2005; Jee & Park, 2009; Mouhadjer, 2013; Olthouse & Miller, 2012; Reese, 2007). Such communities also nurture learners' cultural awareness through the participation of people from different language speaking regions (Jee & Park, 2009; Mouhadjer, 2013).

Increased language input and output. Wu (2012) investigated the informal English learning experience of a group of Chinese residents in the Second Life virtual community. These English language learners (ELLs) were able to learn informal English, such as vocabulary, slangs, expressions, and abbreviations, by interacting with native speakers of English. These contents were otherwise not available through their regular English learning channels. The ELLs also had the opportunity to output their language by communicating with other English-speaking players.

Mouhadjer (2013) assessed the interactions between learners in a videoconferencing-based world cultures course. In this course, 16 learners from Tlemcen University in Algeria and 16 from East Carolina University in North Carolina, USA, conducted both one-to-one and group discussions in English on culture-related content and ideas. Based on the analysis of the student interactions, Mouhadjer (2013) discussed the pedagogical implications of video-based online communication. He suggesed that this type of online setting "provides both qualitatively and quantitatively richer input than non-online foreign language learning settings" (p. 29). However, Mouhadjer (2013) did not provide clear descriptions of his research methods. Some key aspects are unknown to the audience, including what constitutes the data source, how the data were collected, and what approach was applied to analyze the data. Mouhadjer (2013) claimed that

pre-survey and post-survey were completed by students, which was not reflected in the report at all. The reported findings seem to be based on records of student conversations, but the author did not mention this data set when describing the research methods. Therefore, Mouhadjer's (2013) conclusion lacks credibility and trustworthiness (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005) and is subject to the researcher's bias.

Jee and Park (2009) conducted a review of LiveMocha as an online language learning community. In this community, learners interact with each other by submitting their writing or speaking samples for peer feedback and practicing dialogue with others in the voice chat room. Not too surprisingly, there are ample opportunities for LiveMocha users to achieve increased language input and output through such interactions. It needs to be underscored that this is not an empirical study. Jee and Park's (2009) conclusions were generated based on their analysis of the website features. More evidence from empirical data is needed to determine whether or not an online community like LiveMocha can increase language input and output for learners.

Based on these studies, it can be inferred that online language learning communities have the potential for increased language input and output by bringing people together with the objective to communicate and interact in the target language. Such online interaction is more helpful when ELLs are bridged with native speakers to receive more authentic language input. Besides, communications within online communities demonstrate a focus on communicative function rather than language forms, which is congruent with the current theories of effective language teaching (Black, 2005). The previous review of three studies signals the need for more work to support these claims.

Motivating factors

Sense of audience and sense of belonging. Gibby's (2007) analysis of online Spanish

course sections from a community college and Black's (2005) investigation into the English composition activities in an online fan-faction community indicate that in effective communities, immediate reader responses and feedback create a sense of audience. In effect, online communities increase the opportunities for feedback and different perspectives. Peer feedback and comments motivate learners because they feel that they are valued and supported in the community (Jee & Park, 2009).

Chang (2012) examined whether an online learning community was formed by Korean ELLs in an online language course. This graduate-level course featured content-based online activities that encouraged EFL learners to collaborate with other students to solve real-world tasks. The researcher collected reflection journals, written assignments from the 47 students in this course and conducted observations in the virtual classroom. Chang's (2012) analysis of these data manifested several aspects of collaboration, including working together, reading others' work, and exchanging feedback, which fostered a sense of belonging and connection.

With learners of Chinese as a Foreign Language (CFL), Cai and Zhu (2012) conducted a mixed methods empirical study to investigate the impact of an online learning community project on learners' motivation. Their results suggested that CFL students perceived the ability to connect and interact with other CFL learners as one of the major motivating factors. Students commented that "it's motivating to see so many people interested in Chinese". They further added that "[the online project] gives a chance to connect to people one might never have encountered otherwise" (p. 320). These comments actually described a sense of belonging to an entity larger than oneself. They also obtained membership and identity for their participation in the community.

In some cases, as suggested by Olthouse and Miller (2012), "online writing networks

become a curricular differentiation vehicle limiting students only by their interests and capabilities" (Sheffield, 2007, as cited in Olthouse & Miller, 2012, p. 6). Participants can find a sense of belonging by engaging in a supportive peer group where similar interests and capabilities are shared.

Intrinsic motivation. In the discussion of teaching students who are talented in writing with Web 2.0 tools, Olthouse and Miller (2012) also noted that the online writing community permits students to take part in various activities based on interest, leveraging and assisting in retaining their intrinsic motivation. Providing challenging, high-quality literature online can help nurture students' writing interests and "challenge them to grow" (p. 7).

Access to resources. Cai and Zhu (2012) also found the access to learning resources and tools was perceived as a motivating factor by CFL students. The resources and tools may be provided by the website which hosts the community, or more commonly shared by peer learners, as observed in the Second Life community (Wu, 2012) and the community at HJenglish.com (described subsequently; You & Zhang, 2010).

Cultural awareness. By bringing together people with different cultural backgrounds, online communities facilitate inter-cultural communication and understanding, and bolster learners' cultural awareness (Jee & Park, 2009; Mouhadjer, 2013). Culture, as an inseparable component of language (Chang, 2010; Hart, 2012; Reese, 2007), should also be included in the language learning process. With a greater understanding of the culture(s) in which a language is used, the learner obtains enhanced contextual information about how the language skills he/she is learning can be applied. At the same time, he/she is more sensitive to cultural norms and nuances.

Instructional Design Principles for Online Learning Community

Social bonds and cognitive development. You and Zhang (2010) proposed a scheme similar to the CoI model to analyze the learning taking place within online communities. Their scheme consists of three aspects: (1) social presence; (2) affective support; and (3) cognitive development. The authors investigated HJenglish.com, a large online language learning community in China, by analyzing text-based records of activities and surveying participants about their learning experiences. They documented features that enhanced the three aspects of learning in an online community. In regards to social presence, learners established a sense of community with the generation of equal roles, the incorporation of emoticons in their communication, the use of a virtual money incentive system, and events such as the "Wish Wall" activity (i.e., learners post wishes for the community, themselves, other people, etc.) as part of the website anniversary celebration. Exemplar affective supports included encouragement and praise among learners and communication surrounding personal lives. At the same time, learners' cognitive development was promoted by goal-setting, information and knowledge sharing, group collaboration, and motivation of intrinsic needs.

You and Zhang cited Short (1976) when they defined social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (p. 104). However, the features that were categorized into social presence by You and Zhang (2010), such as the virtual money incentive system, failed to fully align with this definition. As might be expected, the affective support category is not entirely distinct from the social presence category. Affective supports from peer learners can also make the other person and interpersonal relationship salient, at least according to the aforementioned definition. Therefore, the categories of social presence and affective support remain questionable. Their

findings, however, provided evidence for the social presence aspect of the CoI model, including emotional expression, open communication, and group cohesion behaviors.

Rovai (2002) summarized seven factors that contribute to sense of community. The first is transitional distance, which refers to "the psychological and communications space between learners and instructors" (Moore, 1993, as cited in Rovai, 2002, p. 7). Transitional distance is affected by structure, which is generated by the instructor's control and is negatively correlated with sense of community and dialogue. In fact, notions of transactional distance are related to the degree of control experienced by learners. Transactional distance is also positively correlated with their perceived sense of community. The second contributing factor is social presence, which is linked to the reciprocal awareness of an individual and others in the community. Social equality, as the third factor, implies that a separate voice, or authoritative tone, in online discussions tends to decrease sense of community, while the connected voice, or inclusive style of discourse, tends to foster it. Other factors include small group activities, group facilitation, teaching style, learning stage, and community size, which will be further discussed in the following sections.

You and Zhang (2010) and Rovai (2002) both acknowledged the importance of the social aspects of an online learning community. Learning in online communities is influenced not only by the extent of cognitive development that is facilitated, but also by the interpersonal relationships and overall social atmosphere. From the viewpoint of social presence, the CoI model focuses on the patterns of learner behaviors; whereas You and Zhang's (2010) and Rovai's (2002) findings suggest factors that have an influence on learners' behavior in the social presence domain. The influencing factors of social aspects indicated by You and Zhang (2010) and Rovai (2002) can be synthesized into three categories: (1) the ratio of control exercised by

each individual (instructor vs. learners, or among different learners); (2) the level of intimacy between individuals; and (3) the quantity of interactions that learners engage in.

Strengthening the social bond. There are ways to strengthen social bonds in online communities. In addition to the seven factors he recognized that contribute to sense of community, Rovai (2002) posited the following seven strategies that instructors can use to enhance community in online learning environments:

1. Learners should be graded on their quantity, quality, and timeliness of their participation;
2. Online instructors should ask for a public self-introduction from all members during the first week of the course;
3. Instructors should solicit alternative views when authoritative style of discourse appears, "or even an 'offline' chat with aggressive students" (p. 9);
4. Small group activities should be arranged;
5. Instructors should learn to play different roles to facilitate group work, including both the fulfillment of group tasks along with group building and maintenance;
6. "Good teaching does two things: (a) it matches the student's stage of self-direction, and (b) it empowers the student to progress toward greater self-direction" (p. 10); and
7. Ideal community size for an online class is between eight to 10 students to ensure effective interaction. Classes with more than 30 students may be leveraged with a team-teaching approach, or by recruiting teaching assistants to facilitate discussion.

Referring to the three influencing factors of social aspects, the ratio of control exercised by each individual can be balanced by Strategies 3, 5, and 6. The level of intimacy between individuals can be increased by Strategy 2. The quantity of interactions the learner engages in

can be ensured by Strategies 1, 4, and 7.

Senior (2010) suggested increasing the disclosure of personal information from not only learners, but also from the instructor: "Language teachers must demonstrate that they are not only effective teachers but also members of their class groups" (p. 145). This also aids in enhancing the level of intimacy between participants.

Facilitating cognitive development. Learners' cognitive development can be promoted in various ways within an online community. Four themes of instructional design principles emerged from the online language learning literature and are detailed as follows.

Design of tasks. Duensing, Stickler, Batstone, and Heins (2006) compared the interactions of a language learning task in a face-to-face tutorial and those of the same task in online environments. Their work suggested that design of the task was one of the three factors that influences the interactions taking place. The other two factors included the learning context and individual tutor style (i.e., teaching style of each tutor).

Reese (2007) indicated that the activities and materials designed for online learning should be motivating and encourage the active use of a second language. Tasks should be related to real-world tasks instead of paper-pencil tests. This real-life notion is supported by You and Zhang (2010). The community environment at HJenglish.com is "as informal and as natural as real life" (p. 5), which compels learners with a sense of community and motivates them to participate more.

Senior (2010) talked about another aspect of task design for online communities. According to Senior (2010), learning activities should not stop at the level of information retrieval, but have information retrieval activities paired with information sharing. She also noted that "without this integrative process classes can easily become fragmented" (Senior, 2010, p.

143). From another perspective, information retrieval involves a low level of cognition while information sharing enables the analysis, synthesis, and evaluation of information and negotiation of meaning. Language learning becomes more effective with deep-processing of information.

Mouhadjer (2013) asserted that using video-conferencing in language learning enabled learners to move from lower cognitive levels of learning (i.e., recognition and comprehension) to higher levels of analysis, synthesis, and evaluation. Video-conferencing, however, is merely a communication tool that affords various kinds of learning activities and with attributes that do not directly correlate with the cognition level of the learning activities. It was rather the content-based discussion versus video-conferencing channel that enabled learning at higher cognitive levels. This finding again demonstrated the importance of task design for effective online community learning.

Collaboration. Collaboration is not only crucial for the development of an online learning community (Chang, 2012), but also an essential aspect of learners' cognitive development (Garrison, 2007; Garrison et al., 2000). Collaboration in an online learning community, according to Garrison et al. (2000) and Garrison (2007), should go beyond simple information sharing. The goal of collaboration is to help learners construct their own meaning in the context of ill-structured reality and delve into the specific culture of a field or discipline. Chang (2012) found that several aspects of collaboration, including working together, reading other's work, and exchanging feedback, induced a sense of belonging and connection. You and Zhang (2010) also saw that the group-centered collaboration facilitated within the HJenglish.com community contributed to effective language learning.

Goal setting. Cognitive development process also requires appropriate meta-cognitive

strategies. Goal-setting, as one of those strategies, is particularly salient from the literature reviewed in this paper. Within the community at HJenglish.com, learners perceived learning as more efficient through goal-setting (You & Zhang, 2010). Gibby (2007) determined the connection between personal learning goals and available interactions as an attribute of effective interactions within online communities.

Tutoring/teaching style. According to Duensing et al. (2006), individual tutoring/teaching style is an influential factor of interactions in online communities. Duensing et al. (2006) compared learner and instructor interactions in three language learning tutorial sections. One of the sections was face-to-face and the other two were online. Interestingly, the in-class interactions differed much in the two online sections, although the same tasks were conducted in the same online tutorial environment. Such differences were found to be a result of the varying teaching styles of the two instructors. Although tutoring/teaching style may not be applicable in the context of this dissertation, where an instructor is not present, it is an intriguing point to note as one of the elements that may help facilitate learner's cognitive development in an online community.

Increasing and retaining motivation. Online learning requires a higher level of self-directedness from learners in comparison to face-to-face learning (Shea & Bidjerano, 2012). During this process, learners' intrinsic and extrinsic motivation is essential to help them initiate and continue their learning efforts. Wu (2012) observed that Chinese ELLs were concerned with the issue of saving "face" – they were afraid to make mistakes in front of other people for fear of compromising their reputation (i.e., "losing face"). Encouraging self-organized group learning may help solve this issue because members of this kind of group "have more trust to each other and less concern about being laughed at" (Wu, 2012, p. 525). You and Zhang (2010) claimed

that an appropriate incentive system is necessary for the successful development of online communities – it would create extrinsic motivation for learners.

The role of technology. Other than the various facets discussed earlier, the technical environment of online communities also has a significant impact on learning, as the medium might restrict or encourage different types of communication, and what learners achieve from communication partially determines what and how well they learn (Garrison et al., 2000).

In their investigation into how an online community affected students' motivation, Cai and Zhu (2012) discovered that technology barriers were perceived as one of the major demotivating factors. The technological interface "shapes, constraints and allows for certain communicative practices" (Hart, 2012, p. 236). From the design perspective, instructional designers and website developers should design a technology interface that fits with the specific learning being sought. From the learner's perspective, students may need training regarding procedural knowledge of how to use the website and its features step-by-step to complete their learning (Hart, 2012).

Interactions among Community Participants

Aside from analyzing online language learning communities from an instructional design perspective, researchers have also investigated the interactions among community participants. Pham, Thalathoti, and Dakich (2014) analyzed the communication records from the online forums that supplemented a face-to-face course. Their study took place with 252 undergraduate students and five instructors in an English course at a Vietnamese university. The researchers collected the online forum communication records to specifically identify the frequency and patterns of interactions between learners and instructors. Pham et al. (2014) revealed that the learners interacted more in the forums at the beginning of the course, but became less active as it

proceeded. More importantly, they identified different interaction patterns, including instructor-initiated, learner-initiated, one-way, two-way, and multi-direction interactions.

Similarly, Li and Kim (2016) examined the patterns of interactions within two groups of students while they engaged in collaborative writing tasks. Each of these two groups consisted of three graduate students as ESL learners in an English for Academic Purposes course. Li and Kim (2016) gathered students' writing samples and reflection papers, and interviewed each of them. Their results demonstrated completely different interaction patterns for each group based on the same writing tasks. Although other research described previously has emphasized the importance of task design for online language learning communities (Duensing et al., 2006; Mouhadjer, 2013; Reese, 2007; Senior, 2010; You & Zhang, 2010), this finding from Li and Kim (2016) indicates that learning tasks are not the dominant factor affecting learner interactions. They suggest that other factors, such as the recognition of individual responsibility, learners' goals of participation, and other personal characteristics, all might influence learner interactions. Perhaps learning presence (Shea & Bidjerano, 2010, 2012) can explain the various influential factors in this situation, as well.

Other means of categorizing patterns of interactions include the active-constructive-interactive framework of Chi (2009) and the three learning stages of Yang and Wu (2011). Chi (2009) hypothesized that interactive activities are the highest level of activities in the learning process, wherein learners interact with other people or learning materials. Interactive activities are followed by constructive activities, which correspond to learners' production tasks, which involve the outputs of newly acquired knowledge. The active level usually involves physical movement while learning, and is less than the interactive and constructive levels, yet much better than being passive. Yang and Wu (2011) defined three stages of online collaborative

interactions, including (1) information acquisition, (2) negotiation of meanings, and (3) information contribution. This three-stage framework from Yang and Wu (2011) concentrated on what learners achieve through different types of interactions, whereas Chi's (2009) framework takes the perspective of learners' internal cognitive process.

Conclusion

Table 1 and Table 2 summarize all the empirical studies reviewed herein. Among the 10 studies on SDL (Table 1) and 15 studies of online language learning communities (Table 2), four were conducted in a traditional classroom setting. Eight studies investigated blended learning environments (one of the seven looked at both blended and instructor led online settings). Three studies focused on informal, self-directed online learning communities, whereas nine others were in the context of instructor-led online learning environments. In addition, two studies examined the language learning activities taking place in online gaming environments. Of particular interest to the researcher is the category of informal self-directed online learning communities. The amount of research in this area is rather insufficient compared to others. Moreover, the existing three studies on informal SDL online communities were all descriptive in nature. One of them collected qualitative data (Black, 2005), whereas the other two (Bonk et al., 2015; You & Zhang, 2010) took a mixed methods approach with both qualitative data and descriptive statistics from survey results. This review of the related literature suggests that: (1) more empirical research is needed to explore informal self-directed online language learning experiences; and (2) research designs must expand in scope to include inferential explanations for the "how" questions.

Various frameworks have emerged from the literature that are conducive to the analysis of the features of online language learning communities. The instructional affordances and

instructional design principles of online language learning communities, as summarized in the Online Community for Language Learning section, guided the feature analysis of The Mixxer community. The CoI model (Garrison, 2007; Garrison et al., 2000) and the SDL conceptual model (Song & Hill, 2007) served as the primary frameworks to illustrate the functions of interactions between learners. In addition, the review of interactions among online learning community participants aided the analysis of the patterns of interactions within The Mixxer community.

Table 1
Summary of Empirical Studies on Self-Directed Learning and Online Learning Environments

Research Study	**Context**	**Research Design**	**Sample and Size**
Adb-El-Fattah (2010)	Traditional classroom setting	Quantitative: Survey	119 students
Avdal (2012)	Traditional classroom setting	Quantitative: Survey	220 students
Bonk et al. (2015)	Informal, self-directed online learning community	Mixed methods: Survey with close-end & open-end items	1,429 learners
El-Gilany (2013)	Traditional classroom setting	Quantitative: Cross-sectional descriptive study; survey	275 students
Kim et al. (2014)	Instructor-led online learning community	Quantitative: Experimental design	60 students from two online sections of the same course
Kop and Fournier (2010)	Instructor-led online learning community	Mixed methods: Quantitative survey; data mining of the course records; qualitative observation, interview, & focus group	One massive open online course
Lai et al. (2016)	Blended learning	Quantitative: Experimental; survey	80 students in one course
Li et al. (2010)	Traditional classroom setting	Quantitative: Cross-sectional survey	46 students
Shea and Bidjerano (2012)	Blended learning & instructor-led online learning community	Quantitative: Survey	2,010 students from 38 institutions
Sze-yeng and Hussain (2010)	Blended learning	Qualitative: Interview; online document analysis; observation	14 students in one course

Note. *Blended learning* refers to the context whereby an online community supplements face-to-face classes.

Table 2
Summary of Empirical Studies on Online Language Learning Communities

Research Study	**Context**	**Research Design**	**Sample and Size**
Black (2005)	Informal, self-directed online learning community	Qualitative: Ethnography; participant observation; discourse analysis	One website
Cai and Zhu (2012)	Blended learning	Mixed methods: Survey with close-end & open-end items	44 students
Chang (2010)	Blended learning	Qualitative: Case study; discourse analysis	One class with six students and one instructor
Chang (2012)	Instructor-led online learning community	Qualitative: Document analysis of student reflection journal, assignments & LMS observation	One class with 47 students
Duensing et al. (2006)	Instructor-led online learning community	Qualitative: Observation; social network analysis & discourse analysis	One face-to-face session and two online sessions of the same course
Gibby (2007)	Instructor-led online learning community	Qualitative: Interview	10 students in one course
Harrison and Thomas (2009)	Blended learning	Qualitative: Ethnography; classroom observation, student reflection	Six students; one website
Hart (2012)	Instructor-led online learning community	Qualitative: Ethnography; participant observation & interviews	Nine learners, 12 trainers, and three members of the development team from one website
Li and Kim (2016)	Instructor-led online learning community	Qualitative: Multi-case study; interviews; document analysis	Six students in two groups
Mouhadjer (2013)	Blended learning	Qualitative: Case study; participant observation	16 students in one course
Ng et al. (2006)	Instructor-led online learning community	Quantitative: Survey	60 students
Pham et al. (2014)	Blended learning	Mixed methods: Descriptive statistics & content analysis of online communication records	252 students & five instructors in one course

Reese (2007)	Other learning community	Qualitative: Ethnography; discourse analysis of online interaction logs	34 players & administrators at one game platform
Wu (2012)	Other learning community	Qualitative: Discourse analysis of forum posts	12 forums at one game platform
You and Zhang (2010)	Informal, self-directed online learning community	Mixed methods: Text-based analysis of online records; survey	One website

Note. *Blended learning* refers to the context whereby an online community supplements face-to-face classes. *Other learning community* refers to other online environments not designed for language learning.

CHAPTER 3

METHODS

Research Design

This study of the online language learning community, as seen in The Mixxer, followed an exploratory sequential mixed methods study design (Creswell & Clark, 2007). Three stages of data collection and analysis were pursued.

Exploratory Sequential Design

Exploratory sequential design is one of the six major research designs of mixed methods studies as defined by Creswell and Clark (2007). In this approach, a research study usually starts from qualitative data collection and analysis, with the purpose of informing the later collection and analysis of quantitative data. The quantitative data collection and analysis then tests or generalizes results from the qualitative phase to a larger population (Creswell & Clark, 2007; Creswell, Klassen, Clark, & Smith, 2011).

Such a research design applies to the exploratory nature of this study, where part of the phenomena remains unknown in theory and no existing instrument can be used to collect the desired data. The qualitative data collection and analysis during Stages One and Two supplied variables and the basis for the development of the survey instrument at Stage Three, and also helped to triangulate the results.

Overview of Data Collection and Analysis Stages

Stage One. The first stage of data collection consisted of three steps related to The Mixxer: (1) initial feature analysis and document analysis; (2) an exploratory interview; and (3) second-round feature analysis and document analysis. These procedures were followed to obtain a sense of The Mixxer context and operation. The first step included an initial feature analysis

(Herring, 2010) of the website and document analysis (Bowen, 2009) of information provided by The Mixxer administrator and user interaction records on the website. The feature analysis and document analysis methods are detailed in the Stage One Data Analysis section below. Data collected during this step entailed examining the website itself as a user and reviewing related documents, including user data, background information of the website, blog posts, English writing correction posts, and other archives. The second step was to conduct a semi-structured interview with the website administrator in charge of website design (see Appendix A for sample interview guiding questions). These two steps, website feature analysis and document analyses along with an exploratory interview, were iterative in nature. In this sense, a last step was a repeated feature analysis and document analysis of the same data sources as in Step One, with the incorporation of interview data gathered from the website administrator in Step Two. Eventually, the results from Stage One data collection and analysis helped shape the interview questions at Stage Two.

Stage Two. After a strong sense of The Mixxer is established, a second stage of research involved semi-structured interviews with eight adult learners who were attempting to learn English via The Mixxer and another eight adult learners who were offering English teaching as native speakers (see the Stage Two Sampling Procedure section). Interview protocols were created based on the analysis results from Stage One (see Appendix B for sample interview guiding questions). Interview data provided qualitative, in-depth information about the learners' experiences within The Mixxer community. It also facilitated the design of the survey questionnaire for the next stage.

Stage Three. A survey of The Mixxer users was the last stage of the data collection. The survey was distributed to adult learners to ask them about their experiences of learning English at

The Mixxer and also understand their interactions with language partners. The survey instrument was developed after the second stage interviews had been completed in order to promote the content validity of survey items (Dillman, Smyth, & Christian, 2014).

Table 3 describes how the data collection procedures answered the research questions.

Table 3
Data Collection Methods to Answer Each Research Question

Research Questions	Data Collection Methods
1. What features of the website support interactions between learners in The Mixxer language learning community?	• Feature analysis and document analysis • Interview with website administrator • Survey with learners
2. What are the patterns of interactions between language learners in The Mixxer community, in terms of the frequency and styles of interaction, and the role of each learner within such interactions?	• Interview with learners • Survey with learners • Document analysis
3. What format do social presence, cognitive presence, and teaching presence take in this informal self-directed language learning context at The Mixxer?	• Interview with learners • Survey with learners • Document analysis
4. How do learners perceive the impact of participation in the community on their self-directed language learning?	• Interview with learners • Survey with learners

The Population of This Study

The population for this dissertation was the 184,825 The Mixxer users who were involved with English learning. Among the 184,825 people, 123,057 were English learners, and 61,768 were English native speakers. English learners came from a wide range of language backgrounds (see Figure 3). The largest number of English learners spoke Spanish as their native language (n=24,943, 13.50%). Languages with more than 10,000 native speakers at The Mixxer included Chinese-Mandarin (n=15,662, 8.47%), Japanese (n=15,376, 8.32%), Portuguese (13,114, 7.10%), Russian (n=12,503, 6.76%), and Arabic (n=11,174, 6.05%). These are followed by French (n=5,519, 2.99%), Persian (n=3,229, 1.75%), Italian (2,966, 1.60%), German

(n=2,146, 1.16%), Vietnamese (n=1,984, 1.07%), Ukrainian (n=1,745, 0.94%), Turkish (n=1,664, 0.90%), Polish (n=1,210, 0.65%), Chinese-Cantonese (n=1,055, 0.57%), Indonesian (n=1,010, 0.55%), and Korean (n=1,002, 0.54%). Finally, 14,611 people (6.25%) listed other languages that were not mentioned herein as their native language in The Mixxer profile.

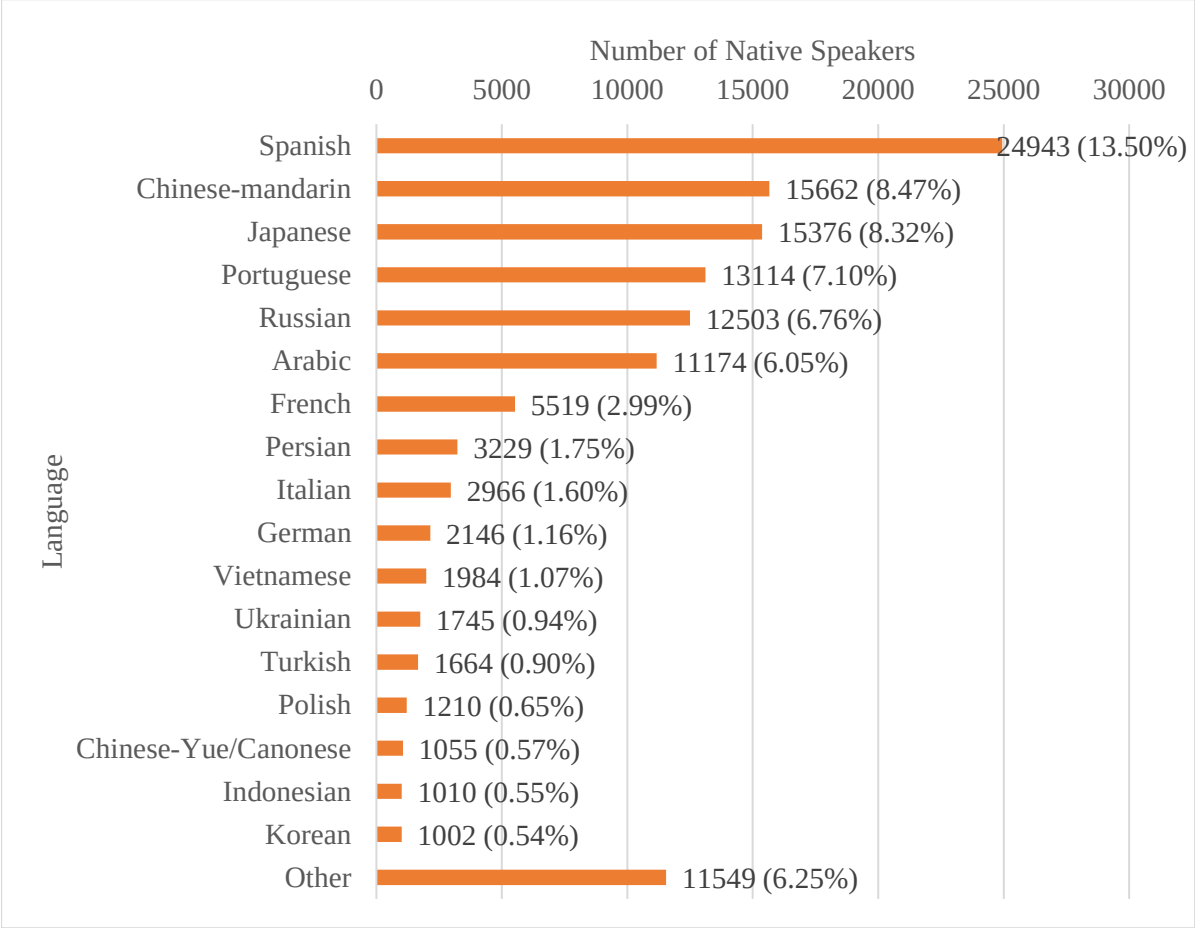

Figure 3. The native language(s) of English learners. Depicted is the native language of English learners at The Mixxer (as they list in their profiles) and the number of people speaking each language.

In terms of age, people between 10 and 39 years old constituted the majority (65.78%) of the English-related population at The Mixxer. Among these individuals, there were 72,515 (39.23%) 20 to 29 year olds, 25,261 (13.67%) 30 to 39 year olds, and 23,801 (12.88%) 10 to 19 year olds. Following were the 40 to 49 years old group (n=8,062, 4.36%) and the 50 to 59 years old group (n=2,973, 1.61%). The groups of 1 to 9 years olds, 60 to 69 years olds, 70 to 79 years

olds, 80 to 89 years olds, and 90 to 99 years olds all accounted for less than 1% of the population. In addition, 51,000 (27.59%) people did not indicate their age on their The Mixxer profiles. Table 4 and Figure 4 summarize the age distribution of the English learner and native speaker populations at The Mixxer.

It must be pointed out that The Mixxer users filled out their age as a constant value instead of the year of their birth when setting up their profile. This resulted in inaccurate age data because their actual age at the time of data collection was likely not the same as what they indicated in their profile unless they updated their profile every year. For example, user A registered at The Mixxer in 2015 and filled in his age as 25. His age should be 28 when data were collected in 2018. However, the data would inaccurately show his age as 25. Consequently, the age distribution data can only offer a glimpse into the population, rather than being used for weighting or other further statistical analysis purposes.

Table 4
Age Distribution of English Learners and English Native Speakers at The Mixxer

Age Group	**English Learner**		**English Native Speaker**		**Entire Mixxer Population**	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1-9	31	0.02%	10	0.01%	41	0.02%
10-19	12,913	6.99%	10,888	5.89%	23,801	12.88%
20-29	50,470	27.31%	22,045	11.93%	72,515	39.23%
30-39	19,574	10.59%	5,687	3.08%	25,261	13.67%
40-49	5,846	3.16%	2,216	1.20%	8,062	4.36%
50-59	1,599	0.87%	1,374	0.74%	2,973	1.61%
60-69	354	0.19%	650	0.35%	1,004	0.54%
70-79	41	0.02%	134	0.07%	175	0.09%
80-89	6	0.00%	13	0.01%	19	0.01%
90-99	7	0.00%	8	0.00%	15	0.01%
N/A	32,247	17.45%	18,753	10.15%	51,000	27.59%
Total	123,057	66.58%	61,768	33.42%	184,825	100.00%

Note. EN = English; N/A = not available.

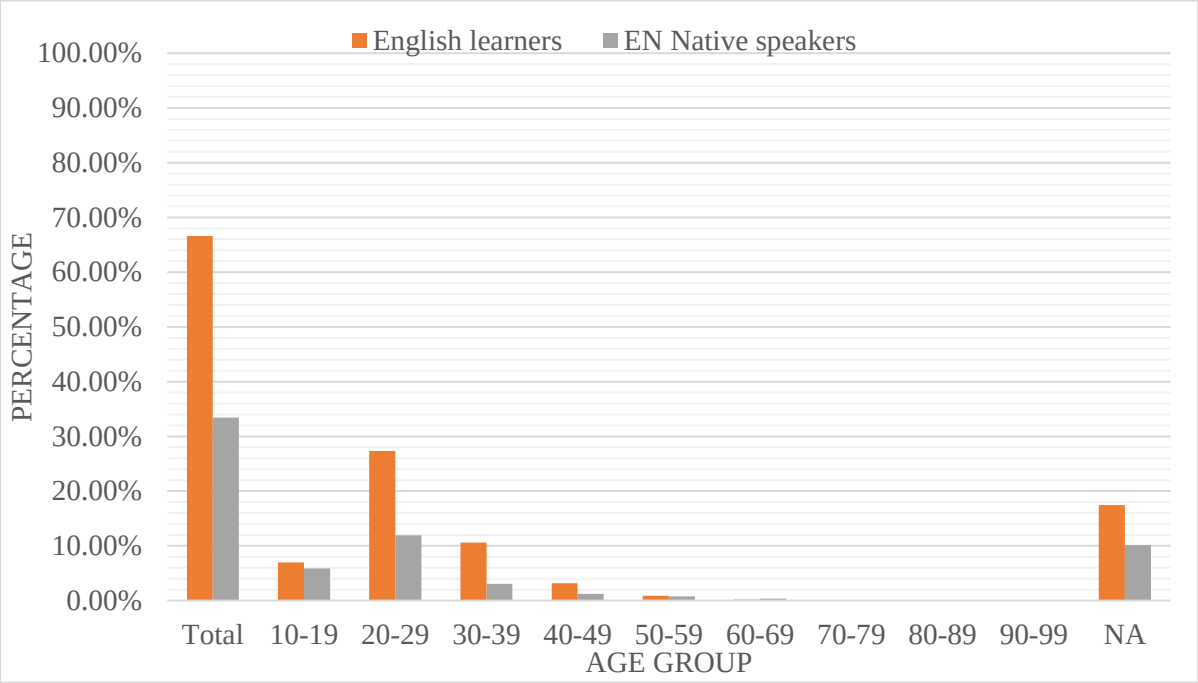

Figure 4. Age distribution of The Mixxer users. EN = English.

Stage One: Feature Analysis and Document Analysis

Sampling Procedure

This study focused on a single language learning website, The Mixxer (http://www.language-exchanges.org/). The Mixxer is identified as a typical online language learning community by its language exchange mechanism. It currently has more than 220,000 registered users. The language learning website (the case) here was determined based on two criteria:

- The website has a large number of active users; and
- The website supports interactions between learners.

The sample for document analysis was collected based on the information provided by the website administrator, including all texts from the About The Mixxer and FAQ (Frequently Asked Questions) pages, the 40 English lesson modules under the Lessons section, the first five

pages of user blog posts, and a total of 12 webmaster blogs.

Data Analysis

Analysis methods for the first stage of data collection included feature analysis of the website, document analysis of related documents, and thematic analysis of the interview data.

Feature analysis. According to Herring (2010), Web content is in many cases different from traditional text-based or image-based content. Hyperlinks, textual exchanges, and themes (i.e., central themes of a website or webpage) are all important components of the Web and convey meanings. Traditional content analysis approaches do not apply to these new forms of content. In response, Herring (2010) highlighted the need for new Web Content Analysis (WCA) methods.

WCA includes image analysis, theme analysis, feature analysis, link analysis, exchange analysis, language analysis, and many other methodological components that may emerge with new types of Web content (Herring, 2010). Terms, such as feature analysis, are used to indicate the types of content for analysis. WCA, including feature analysis that this very dissertation employs, follows traditional content analysis (CA) guidelines to enable "objective, systematic, and quantitative description of the content of [web] communication" (Baran, 2002, p. 410, as cited in Herring 2010, p. 12). However, different from features of traditional CA, such as fixed coding schemes and random sampling, WCA allows the invention of new coding schemes and non-random samples. In addition, both manual and automated coding are allowed in WCA to classify and count phenomena of interest as opposed to traditional CA mostly relying on manual coding (Herring, 2010).

Guidelines and procedures for feature analysis and other WCA methods have not yet been developed. Herring (2010) called for future research to generate "principled accounts of,

and guidelines for" (p.12) the analysis of varied Web content. The researcher of this dissertation explored the website as an English learner, took screenshots of all the Webpages, typed in detailed descriptive notes of the design features of the website, and then adhered thematic analysis methods to analyze the descriptive notes.

Document analysis. Document analysis is "a systematic procedure for reviewing or evaluating documents — both printed and electronic (computer-based and Internet-transmitted) material" (Bowen, 2009, p. 27). The analysis of documents adopts the thematic analysis (Braun & Clarke, 2006) method, in which the researcher performs coding of the document text and identifies themes among the codes.

Thematic analysis. This is a qualitative analytic method "for identifying, analyzing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 82). Thematic analysis in this dissertation generally follows these four steps: (1) becoming familiar with the documents; (2) generating initial codes; (3) forming, refining, and defining themes; and (4) producing reports.

Stage Two: Interview with Learners

Sampling Procedure

At this stage, a criterion-based convenience sampling strategy (purposeful) was applied. The sample for interviews consisted of learners who meet the following criteria:

- Being an adult;
- Currently involved in English learning or helping others' English learning at The Mixxer;
- Being an active participant in The Mixxer learning community for at least one month by interacting with other language learners through The Mixxer platform with a focus on language learning. This characteristic was determined by user profile search at The

Mixxer website, where search results were sequenced based on the user's last login time. With this, the length of an individual's The Mixxer membership is listed in their user profile. Filter questions were also asked during interviews to confirm that the sample fulfilled this criteria;

- Volunteering to participate in this study; and
- Speaking either English or Chinese, in order for the researcher to communicate with the participant.

A sample size of 16 people were recruited at Stage Two. One or two in-depth interviews were conducted with each interviewee. During the interview recruitment process, the researcher sent three rounds of emails to a total of 137 users identified from the user profile search results. Fifteen participants were recruited from the email invitations. A snow-ball sampling strategy was also utilized and brought in one more The Mixxer user to participate in the interviews. The recruitment process ceased when data saturation was observed, at which point data redundancy occurs and new data contribute little or no new information to the codebook (Guest, Bunce, & Johnson, 2006; Morse, 2007).

Demographics of Interview Participants

The researcher interviewed a total of 16 users, with eight people helping others with English learning (participants NS1 to NS8 in Table 6) and eight others practicing English at The Mixxer (participants L1 to L8 in Table 6). Two pairs of language partners were identified: participants 5 and 14, and participants 8 and 10. As shown in Table 5, some non-native speakers of English with advanced proficiency levels also assisted others to learn English during their language exchange. Therefore, native speakers of English at The Mixxer are defined as individuals who list English as their native language in their profile.

Table 5
Demographic Information of 16 Interviewees

Participant	Gender	Age	Country	Occupation	Native Language(s)[a]	Language(s) Learning
NS1	W	30	US	French major PhD student	English	French, Russian
NS2	M	62	US	Retired	English	Spanish
NS3	W	64	US	Retired	English	Japanese
NS4	W	24	Ukraine	Online English teacher	Russian, English	Polish
NS5	M	30+	India	Freelance consultant and writer	Hindi, English	French, Arabic, Spanish, Russian, German, Chinese
NS6	M	78	US	Retired lawyer	English	Spanish
NS7	M	Senior	Malta	Retired; Studied economics	Maltese, English	Japanese, Arabic, Italian, Russian, Chinese
NS8	W	18	US	College student	English	Spanish
L1	M	51	Spain	N/A	Spanish	English
L2	M	23	Mexico	New graduate of Micro-biology	Spanish	English
L3	M	N/A	Colombia	Freelance	Spanish	English
L4	W	57	Italy	Graphic and jewelry designer, chef	Italian	English
L5	M	62	Italy	Secondary school teacher (literature and history)	Italian	English
L6	M	30+	Germany	Secretary	German, English	English, French
L7	M	46	Spain	Works for the army	Spanish	English
L8	M	50	Spain	Mechanical engineer	Spanish	English

Note. M = man; W = woman; N/A = not available; 30+ = in their 30s.
[a] Native language(s) as users indicate on their The Mixxer profile.

Among the 16 interviewees, five were women while the remaining 11 were men. The age distribution of all interviewees turned out to deviate significantly from the age distribution of

The Mixxer population: one (6.25%) of the interviewees was a teenager; two (12.5%) were in their twenties; three (18.75%) were in their thirties; one (6.25%) was in his forties; and eight (50%) were from 50 to 78 years old.

More than half of the English native speaking interviewees came from the USA, with two, respectively, from India and Malta where English is one of their official languages, and one from Ukraine. Six English-learning interviewees came from European countries, including Spain (n=3), Italy (n=2), and Germany (n=1). The other two English learners were from South America, Mexico, and Colombia specifically. Occupation-wise, four interviewees were retired. Two were students at higher education levels and another one was a new college graduate. Two were teachers. The other six interviewees reported occupations varying from freelance writers to designers, chef, secretary, engineer, and working in the army. Only one interviewee did not share information about his occupation. Four people were bi-lingual, and four were learning multiple languages.

Data Collection

The interview protocol (see Appendix B) was created with the incorporation of results from the Stage One feature analysis, document analysis, and interview with the website administrator. Demographic information was collected at the beginning of the interview about their age, occupation, native language, and the language they were learning. Participants were also asked about their language learning motivation, how long they had been using The Mixxer, and how many partners they had found. This was followed by a detailed discussion of their language exchange experiences, covering the following facts:

- How often and how long their exchanges were;
- How they arranged the time for two languages;

- What a typical exchange session was like;
- Whether they taught each other something;
- Whether they corrected each other's mistakes;
- What functions of The Mixxer website they used frequently;
- What influence they had perceived from their Mixxer experience;
- Whether they had preferences when looking for partners; and
- What other things besides exchanges at The Mixxer they engaged in for their language learning.

Data Analysis

During the second stage, interview data were analyzed with two coding mechanisms: (1) thematic analysis (Braun & Clarke, 2006); and (2) the CoI framework-guided content analysis.

Thematic analysis. The thematic analysis at Stage Two followed the same steps as described at Stage One: (1) becoming familiar with the documents; (2) generating initial codes; (3) forming, refining, and defining themes; and (4) producing reports. Thematic analysis of interview data generalized results for Research Question 1, what features of the website support interactions between learners in The Mixxer language learning community, Research Question 2, what are the patterns of interactions between language learners in The Mixxer community, and Research Question 4, how do learners perceive the impact of participation in the community on their self-directed language learning.

Content analysis. Content analysis is a widely accepted method of analyzing text data with a given set of codes and procedures (Bauer, 2000). Content analysis guided by the CoI framework helped answer Research Question 3, what format do social presence, cognitive presence, and teaching presence take in this informal self-directed language learning context at

The Mixxer.

The unit of analysis was sentences from interview transcripts. First, a coding scheme was synthesized and adapted from the CoI literature (Anderson, Rourke, Garrison, & Archer, 2001; Garrison, 2007; Garrison et al., 2000; Garrison, Anderson, & Archer, 2001; Rourke, Anderson, Garrison, & Archer, 2001. See Table 6). The researcher then coded the interview transcripts based on this scheme. The initial codes were at the indicator level as in Table 6. New labels were generated for units that did not fit into existing CoI indicators. Finally, the researcher organized all indicators into the categories under each presence.

Classical content analysis is partially a quantitative method, involving counting frequencies of the occurrence of particular categories (Joffe & Yardley, 2004). The researcher did not complete this quantitative step of content analysis in this study, for the reason that self-reported data from interviewees cannot holistically reflect the interactions among self-directed learners within The Mixxer community. Most of the language exchange interactions took place in private venues, such as Skype chat, and were not accessible. How often an interviewee mentioned certain categories in the conversation might only indicate his/her willingness or ability to talk about the topic instead of the actual frequencies of interactions in their language exchange (Joffe & Yardley. 2004). Moreover, the purpose of Stage Two data collection and analysis was to inform the development of the survey instrument at Stage Three. Results in the format of qualitative categories and themes were sufficient in this case.

Table 6

Community of Inquiry Coding Scheme for The Mixxer Community

Elements	Categories	Indicators
Social presence	Affective expression	Expression of emotions Humor Self-disclosure
	Open communication	Asking questions Complimenting Expressing agreement Expressing appreciation Risk-free expression
	Group cohesion	Addressing participants by name (vocatives) Addressing the group as "we," "our," or "us" Encouraging collaboration Phatics and salutations (greetings, closures, etc.)
Cognitive presence	Triggering event	Recognizing the problem Sense of puzzlement
	Exploration	Brainstorming Divergence within community (unsubstantiated contradiction of previous ideas) Divergence within a single message (presenting different ideas/themes) Information exchange Leaps to conclusions (unsupported opinions), Suggestions for consideration
	Integration	Connecting ideas Convergence among group members (Building on, adding to others' ideas) Convergence within a single message (justified, developed, defensible, yet tentative hypotheses) Creating solutions Synthesis (sources: textbook, articles, personal experience)
	Resolution	Applying new ideas Defending solutions Testing solutions
Teaching presence	Design & organization	Designing methods Establishing time parameters Establishing netiquette Setting Curriculum Utilizing medium effectively
	Facilitating discourse	Assessing the efficacy of the process Drawing in participants, prompting discussion Encouraging, acknowledging, or reinforcing student contributions Identifying areas of agreement/disagreement Seeking to reach consensus/understanding

	Setting climate for learning
Direct instruction	Confirming understanding through assessment and explanatory feedback Diagnosing misconceptions Focusing discussion on specific issues Injecting knowledge from diverse sources Presenting content/questions Responding to technical concerns Summarizing the discussion

Note. Adapted from "Assessing Teaching presence in a Computer Conference Environment" by T. Anderson, L. Rourke, D. R. Garrison, and W. Archer, 2001, *Journal of asynchronous learning networks*, *5*(2), p. 1-17; "Online community of inquiry review: Social, cognitive, and teaching presence issues." by D. R. Garrison, 2007, *Journal of Asynchronous Learning Networks*, *11*(1), p. 61-72.; "Critical Inquiry in a text-based environment: Computer conferencing in higher education." by D. R. Garrison, T. Anderson, and W. Archer, 2000, *The Internet and Higher Education*, *2*(2-3), p. 87-105; "Critical Thinking, Cognitive Presence, and Computer Conferencing in Distance Education." by D. R. Garrison, T. Anderson, and W. Archer, 2001, *American Journal of Distance Education*, *15*(1), p. 7-23; and "Assessing social presence in asynchronous, text-based computer conferencing." by L. Rourke, T. Anderson, D. R. Garrison, and W. Archer, 2001, *Journal of Distance Education*, *14*(3), p. 51-70.

Stage Three: Survey

Sampling Procedure

A stratified random sampling strategy was applied to the survey, with English learners and English native speakers defined as the two strata.

According to The Mixxer user profile search results, a total number of 224,621 users were registered at The Mixxer by August 2nd, 2018. Among the 224,621 users, 184,825 were involved in English learning, either learning English or aiding others with English learning. This 184,825 English-related population was the focus of this dissertation study. Considering the large population size, the following equation was used to calculate the desired sample size (Smith, n.d.):

$$Necessary\ Sample\ Size = \frac{Zscore^2 \times \mathrm{SD} \times (1 - \mathrm{SD})}{Sampling\ error^2}$$

With a Z-score of 1.96 (95% confident interval), a 0.5 standard deviation (SD), and a

preferred sampling error of ±5%, the calculation result indicated a desired sample size of 384 respondents.

The recruiting method for the survey was similar to the process at Stage Two. With permission from the website administrator, the researcher sent a survey participation request to a total of 12,170 The Mixxer users via email in August 2018. The Mixxer user data showed that 123,057 (66.58% of the 184,825 English learning related population) were English learners, while 61,768 (33.42%) were native speakers of English. Based on this ratio and observed response rates (approximately 3.3% among English learners and 4.4% among English native speakers), a survey invitation was sent to 9,205 The Mixxer users who listed English as the language they were learning in their user profile, and 2,966 The Mixxer users who listed English as their native language.

After three weeks of data collection, the survey received 536 eligible responses. Of these, 396 responses with a completion rate of 60% or above were included in the analysis.

Instrument

A Web-based survey was developed based on the literature (e.g., the CoI framework) and interview results. The Qualtrics online survey platform (www.qualtrics.com) was used to host the survey.

The survey consists of 25 questions (see Appendix C). Questions 1 through 6 enquired about demographic information, such as age group, gender, occupation, country, native language(s), and language(s) the participant was learning. Among the first six questions, Question 1 served as a filter to exclude The Mixxer users younger than 18-years old. Question 7 asked about participant's motivation behind language learning. Questions 8 to 11 were regarding how long and how often the participant was conducting language exchange at The Mixxer, as

well as their number of language partners.

Respondents who selected, “You have not conducted language exchanges yet”, in question 11 were directed to the end of survey. Other respondents were able to continue and answer the remaining questions. Questions 12 through 19 probed details of the language exchange, including the tool for communication, length of exchange, time arrangement for two (or more) languages, styles and activities, preparation before exchange, topics of conversations, and relationship with partners. Question 16 was displayed to a respondent only when the “You correct each other’s mistakes” item in question 15 received a rating of “sometimes,” “often,” or “always.” Question 22 invited the respondent to reflect on the influence of their Mixxer experience. Remaining questions requested additional information related to The Mixxer website usage, preferences when selecting language partners, challenges in the exchange, and other language learning efforts. The last question offered a text box for the participants to type in any additional comments.

Potential sources of error for the survey include non-response error and measurement error. Several methods were applied to increase the response rate and reduce non-response error: Efforts (e.g., pre-testing with potential participants) were made to ensure that the survey took no more than 15 minutes to complete. The recruiting message stressed the relevance and benefits of survey participation to learners. Contact information of The Mixxer website administrator was also provided as a means of verification to increase the credibility of the recruiting message. To diminish potential measurement error, both experts of survey methodology and experts of the subject area, four people in total, were consulted to review the survey instrument. Respondent debriefing was conducted with two potential participants to discuss the survey items.

Demographics of Survey Respondents

Age groups. Demographic data from the survey showed larger population in younger age groups in comparison with older age groups (see Figure 5). Among the 396 responses, slightly more than one third (n=136) of individuals reported to be between 18 to 29 years old. Roughly one quarter of the respondents (n=100) were between 30 to 39 years old. The 40 to 49 year old group (n=60) and 50 to 59 year old group (n=58) were similar in size, both constituting 15% of all respondents. People who were 60 to 69 years old (n=32) accounted for only 8.08% of all respondents. The least amount (n=10, 2.53%) of respondents selected 70 or older in terms of age.

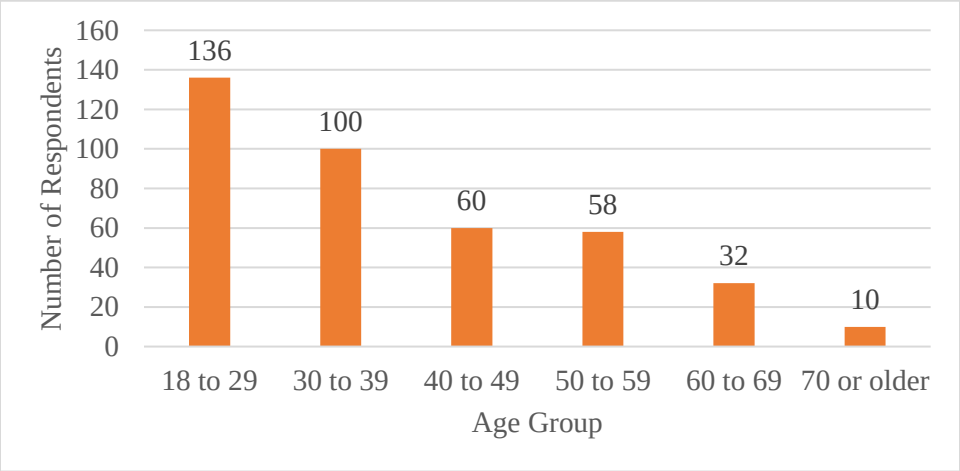

Figure 5. Age distribution of survey respondents.

Gender. The gender distribution of survey respondents was significantly skewed towards the male population (see Figure 6). Almost two thirds of all respondents (n=263) were men, while only close to one third (n=130) were women. Three people (1%) selected the "Other" option in the question asking for gender. The researcher was unable to compare this data with The Mixxer user population – the gender data of The Mixxer users were not available.

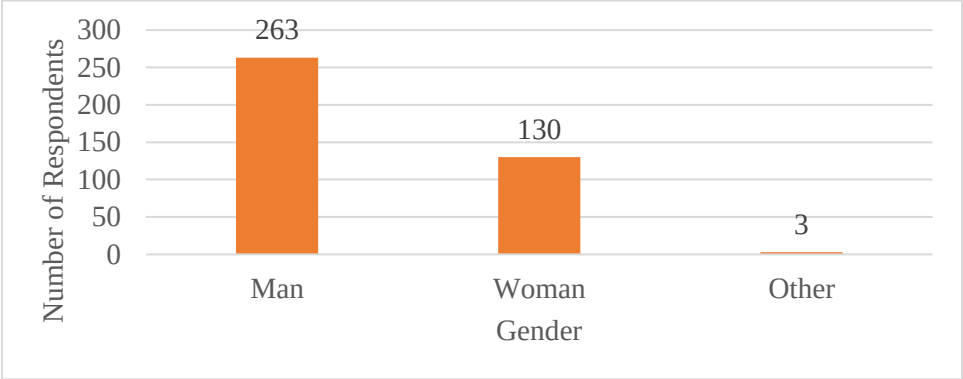

Figure 6. Gender distribution of survey respondents.

Geographic information. The 396 respondents came from 60 different countries and regions (see Figure 7 and Figure 8). The largest number of people were from the USA (n=82, 20.71%), and this was not surprising to find at a US-based website, The Mixxer. The second largest group was individuals from Spain (n=35, 8.85%). There were 5.06% respondents from France (n=20), 4.55% from Japan (n=18), 4.55% from Russia (n=18), and another 4.55% from Colombia (n=18). These were followed by people from Mexico (n=17, 4.29%), Brazil (n=16, 4.04%), Italy (n=14, 3.54%), United Kingdom (n=12, 3.03%), Argentina (n=12, 3.03%), and People's Republic of China (n=12, 3.03%). The remaining 122 respondents came from Canada, Ukraine, Iran, Taiwan, Germany, Algeria, Egypt, Ireland, Australia, Venezuela, and so forth, just to name a few. It should be noted that two participants listed two countries/regions as the place of their citizenship, with one participant from England and Sweden, and the other from United Kingdom and Australia.

Grouped into continents, there were 133 participants (33.59%) from Europe, 90 participants (22.73%) from North America, 80 participants (20.20%) from South America, 63 participants (15.91%) from Asia, and 26 participants (6.57%) from Africa. Only five (1.26%) emanated from Australia.

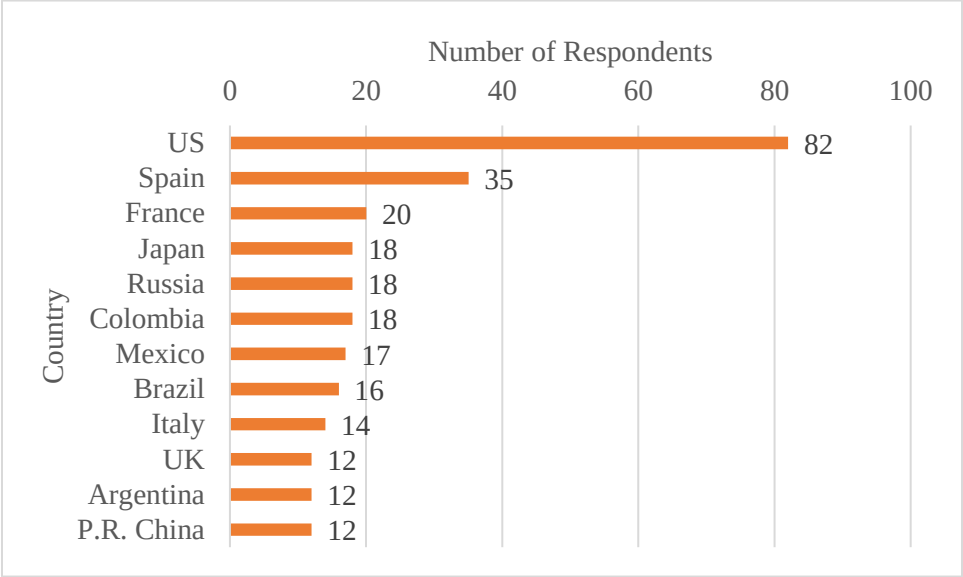

Figure 7. Top 10 countries where survey respondents originated from.

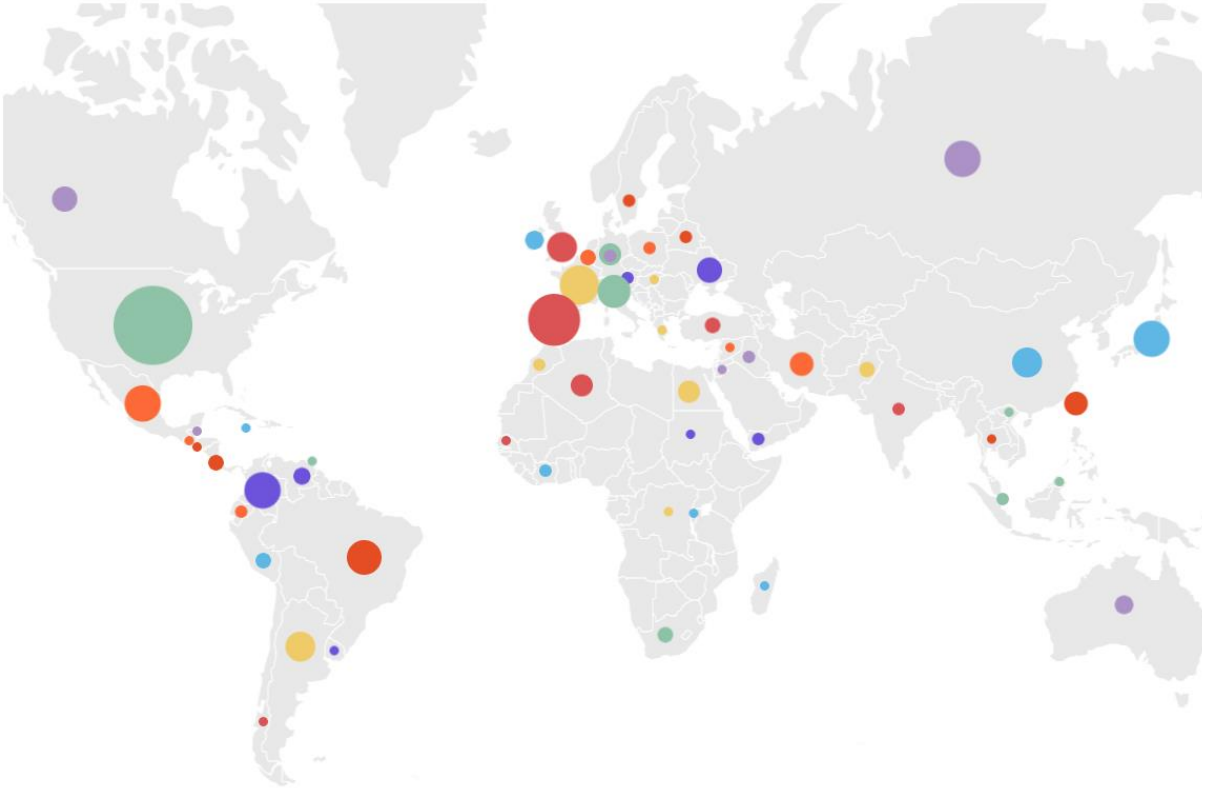

Figure 8. Geographic distribution of survey respondents. Larger dots indicate more survey respondents from the region.

Native languages and languages sought. Among the 396 responses, 254 (64.14%) were English learners and approximately 30% (n=118) were native speakers of English. These two values were slightly lower than the percentages of English learners (66.58%) and English native speakers (33.42%) in The Mixxer population. In addition, 24 others were non-English native speakers who were either learning other languages or not learning any language at the time of taking the survey.

Figure 9 summarizes the native languages of the respondents. The same categories of native languages as in The Mixxer population data were calculated here for survey participants, so that comparisons could be made (see Table 7). Spanish native speakers (n=102, 26%) appeared to be the largest group among English learners, almost twice the proportion of Spanish speakers throughout the whole population (13.50%). French native speakers (n=31, 7.83%) was another large group, in contrast to 2.99% French speakers within the population. In addition, Italian (n=15, 3.79%), German (n=9, 2.27%), and Ukrainian (n=6, 1.51%) also had substantially higher percentages of native speakers than their proportions in the population, which were respectively 1.60%, 1.16%, and 0.94%. Four language groups seemed under-represented: Chinese (n=23, 5.80%), Japanese (n=18, 4.55%), Portuguese (n=17, 4.29%), and Vietnamese (n=1, 0.25%). The population had 9.64% Chinese speakers (Mandarin and all dialects), 8.32% Japanese speakers, 7.10% Portuguese speakers, and 1.07% Vietnamese speakers. Russian (n=24, 6.06%), Arabic (n=22, 5.55%), Persian (n=7, 1.77%), Turkish (n=3, 0.76%), Polish (n=2, 0.51%), and other languages (n=24, 6.06%) had similar percentages of native speakers as members of the population. Interestingly, there were no Indonesian speakers or Korean speakers participating in the survey.

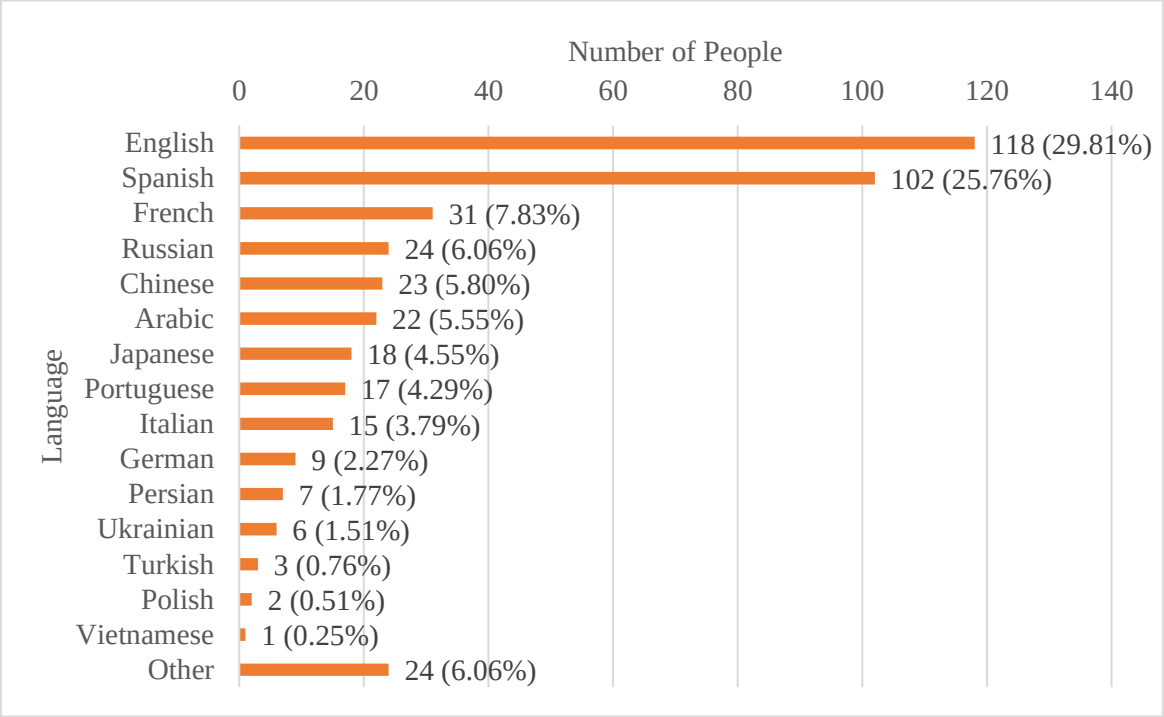

Figure 9. Native languages of survey respondents. The "other" category included Catalan, Telugu, Hindi, Urdu, Thai, Greek, Hungarian, Wolof, Swedish, Marwari, Marathi, Malagasy, Kinyarwanda, Gujarati, Galician, Patois, Pashto, and Karachai.

Table 7

Comparison of Native Languages and the Number of Speakers among Survey Respondents and the Population

Native Language	**Percentage in Survey Respondents**	**Percentage in the Population**
English	29.81%	33.42%
Spanish	25.76%	13.50%
Chinese (Mandarin, Cantonese, MinNan, Gan, Wu, Jinyu, Hakka, and Xiang)	5.80%	9.64%
Japanese	4.55%	8.32%
Portuguese	4.29%	7.10%
Russian	6.06%	6.76%
Arabic	5.55%	6.05%
French	7.83%	2.99%
Persian	1.77%	1.75%
Italian	3.79%	1.60%
German	2.27%	1.16%
Vietnamese	0.25%	1.07%
Ukrainian	1.51%	0.94%
Turkish	0.76%	0.90%
Polish	0.51%	0.65%
Indonesian	0%	0.55%

Korean	0%	0.54%
Other	6.06%	6.25%

Survey participants reported learning a total of 24 languages at The Mixxer. The top 10 most popular languages that respondents were learning at The Mixxer is portrayed in Figure 10. The majority of respondents were English learners (n=254, 64.14%). Spanish was the second most popular language, learned by 14.40% of all respondents (n=57), and it was followed by French with 46 reported learners (11.62%). Japanese (n=38, 9.59%) and German (n=28, 7.07%) were also popular with more than 5% learners. Respondents also reported learning Chinese (n=15, 3.78%), Italian (n=11, 2.78%), Russian (n=11, 2.78%), Portuguese (n=7, 1.77%), and Arabic (n=5, 1.26%). Eighteen people (4.55%) were learning other languages, such as Dutch, Serbian, Esperanto, Indonesian, Albanian, etc. Six people reported they were not learning any languages at The Mixxer when they took the survey.

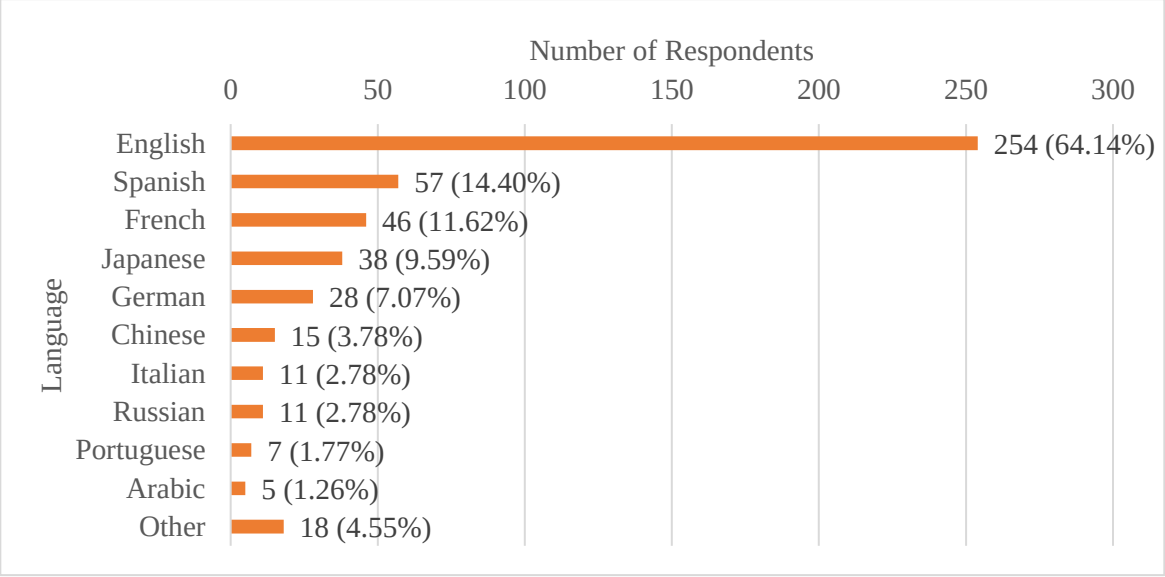

Figure 10. Languages that survey participants were learning at The Mixxer. The "other" category included Dutch, Serbian, Esperanto, Indonesian, Albanian, Croatian, Bosnian, Sinhalese, Swedish, Persian, Danish, Vietnamese, Finnish, and Austrian.

Data Analysis

The major analysis of the survey data at Stage Three included descriptive statistics (e.g., means, standard deviation, frequencies) in the Statistical Package for the Social Sciences (SPSS) version 25 (IBM, Chicago, USA) and Microsoft Excel 2013 (Redmond, USA). Thematic analysis procedures were also followed to analyze the qualitative data from the survey. In addition, correlations were calculated to discover possible patterns.

Credibility

The following techniques were adopted to enhance the credibility of this study:

Data triangulation and methodological triangulation. Data of this study were collected from varied sources, including website records and documents, user posts, interviews with the website administrator, interviews with users, and user survey responses. Multiple methods, such as feature analysis, document analysis, interviews, and a survey, were employed to collect and analyze data both qualitatively and quantitatively.

First-level member checks. Transcriptions of interview recordings were sent to participants prior to the analyses and interpretations of results. Among the 16 interviewees, four completed the member check of the transcripts.

Negative case analysis/disconfirming evidence. The researcher looked for evidence inconsistent with the themes (outliers) during the analysis.

Peer debriefing. The dissertation committee reviewed the final report and provided critical feedback on descriptions, analyses, and interpretations of the results.

Prolonged engagement. The researcher conducted multiple, in-depth interviews, and inspected a wide range of relevant documents, as "an investment of sufficient time to ensure accurate understanding of the scope (breadth) of the target phenomenon" (Lincoln & Guba,

1985, as cited in Nastasi & Schensul, 2005, p. 185).

Researcher reflexivity. The researcher attempted to understand and self-disclose her assumptions, beliefs, values, and biases (i.e., being forthright about position/perspective).

Thick description. Sufficient quotes and field note descriptions were made available to provide evidence for the researcher's interpretations and conclusions.

CHAPTER 4

RESULTS FOR RESEARCH QUESTION 1

Chapter 4 reports the analysis results of the qualitative data from the feature analysis, document analysis, and the interview with the website administrator during Stage One, as well as survey question 20 from Stage Three. The findings offered an overview of The Mixxer website features that supported interactions between self-directed language learners, including the functions that facilitated the establishment of partnership, items supporting exchange activities, and additional social spaces.

Overview of The Mixxer

Different from many commercial language exchange platforms, The Mixxer is "an entirely free non-profit website hosted by Dickinson College" as stated on its home page. It was started in response to a professor's need to connect native speakers of Japanese to students in her language class. Todd Bryant, a language technology specialist from Dickinson College, was the person who created The Mixxer and has been managing the website ever since.

The website is free and open to everyone with Internet connections and allows individuals to connect with each other for language exchange. As a result, The Mixxer has attracted hundreds of thousands of individual learners, offering a huge pool of native speakers for classroom exchanges (Bryant, 2016). More often, these individual learners pair up with each other and engage in self-directed language exchanges. The individual language exchanges now constitute almost 99% of all exchanges taking place within The Mixxer community according to Bryant's estimation (personal communication, April 10, 2017). Everyone can look for partners that match their own language learning needs, and then talk to each other on Skype or another tool through partners' mutual agreement. The website itself does not provide communication

tools. In addition to the conversational language exchange, they can share their writings on the website and have other users make corrections (see Figure 11). Apart from these two major language-exchange-focused activities, users can go through some lessons together with their partners, and publish blog posts while reading others' blogs in the shared Blog space.

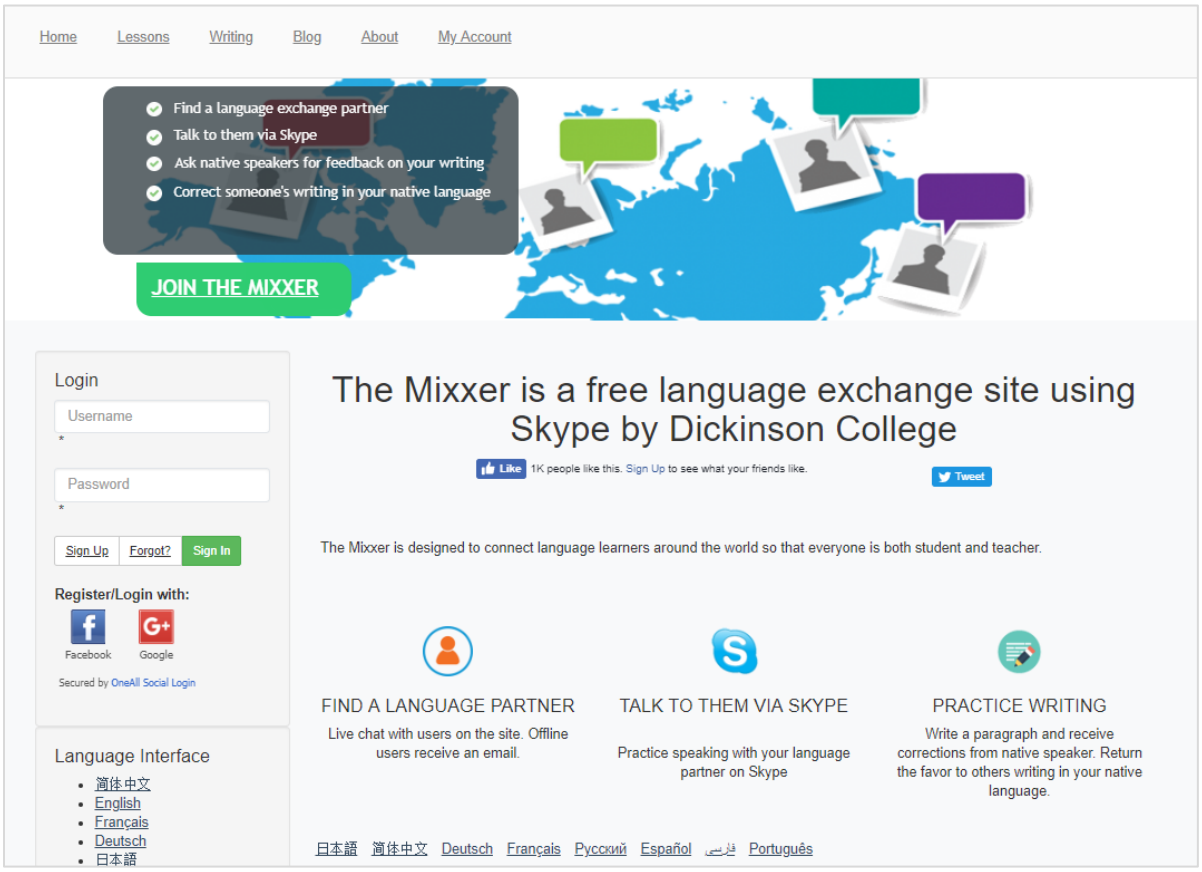

Figure 11. Home Page of The Mixxer highlighting major activities.

Findings from Qualitative Data

Establishing Partnerships

The website is built with a very simple structure (see Figure 12 for the menu items). The user profile system and messaging system are what facilitate the establishment of language partnership.

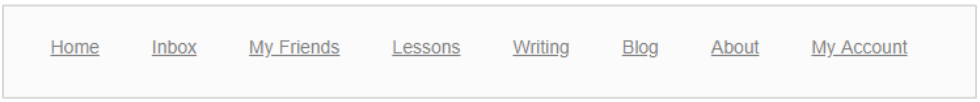

Figure 12. The Mixxer menu items after logging in.

When registering for an account, the user fills in an email address, username, first name, gender, language sought, and native language. They can choose to provide additional information from the following categories: last name, age, country, time zone, profile picture, Skype name, reasons for learning a language, and availability (when they can meet on Skype). After logging into the account, users will see a list of suggested language partners on the home page. Further, they can click on each link and read each profile. Multiple profile search boxes also appear in the side bar on the left (see Figure 13) for people to access a more comprehensive list of users based on language sought, native language, and country.

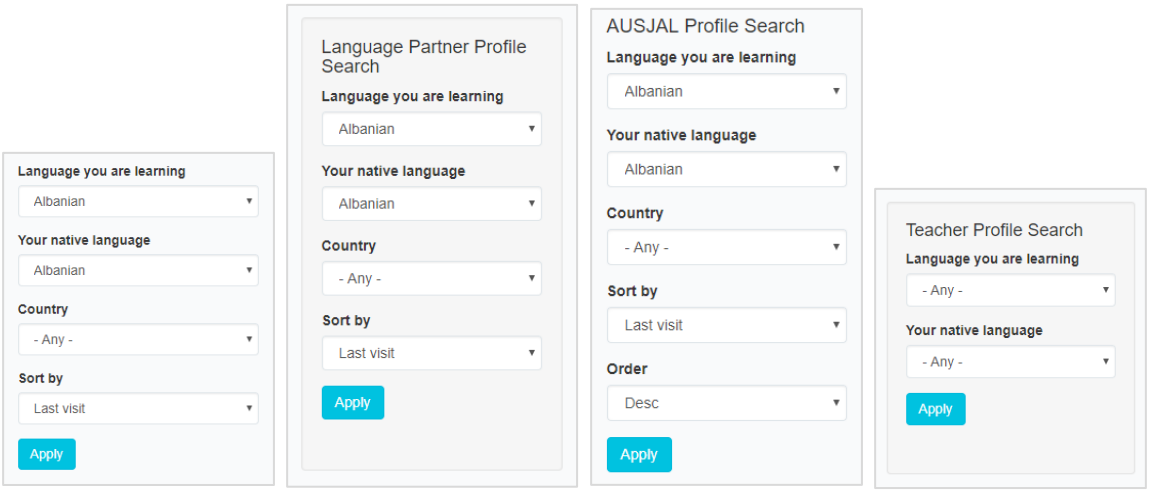

Figure 13. User profile search boxes on the left side bar.

After the user reads the profiles and decides which person to contact, he/she has two options: (1) click the "Message xxx (username)" link, which opens up a chat window at the bottom-right corner of the screen; and (2) click the "Become xxx's Friend" link, which sends a new friend request to that person. All the chat messages can be managed on the Inbox page, and

all the friend relationships can be managed on the My Friends page (see Figure 14 and Figure 15).

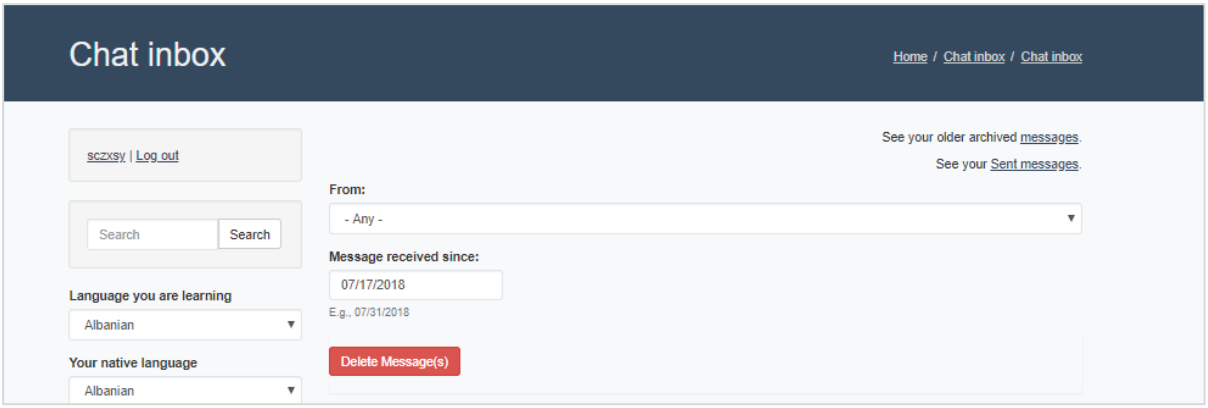

Figure 14. Inbox page of The Mixxer.

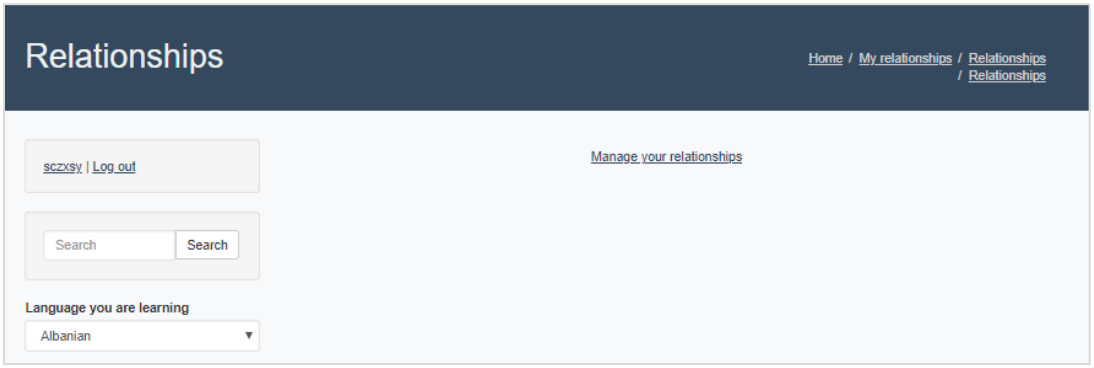

Figure 15. My Friends page of The Mixxer.

Another small feature for building relationships is the Thumbs Up button on the profile page. Users click on it to say “thank you” to someone. The total number of thumbs up a user receives is displayed at the top of his/her profile page (see Figure 16).

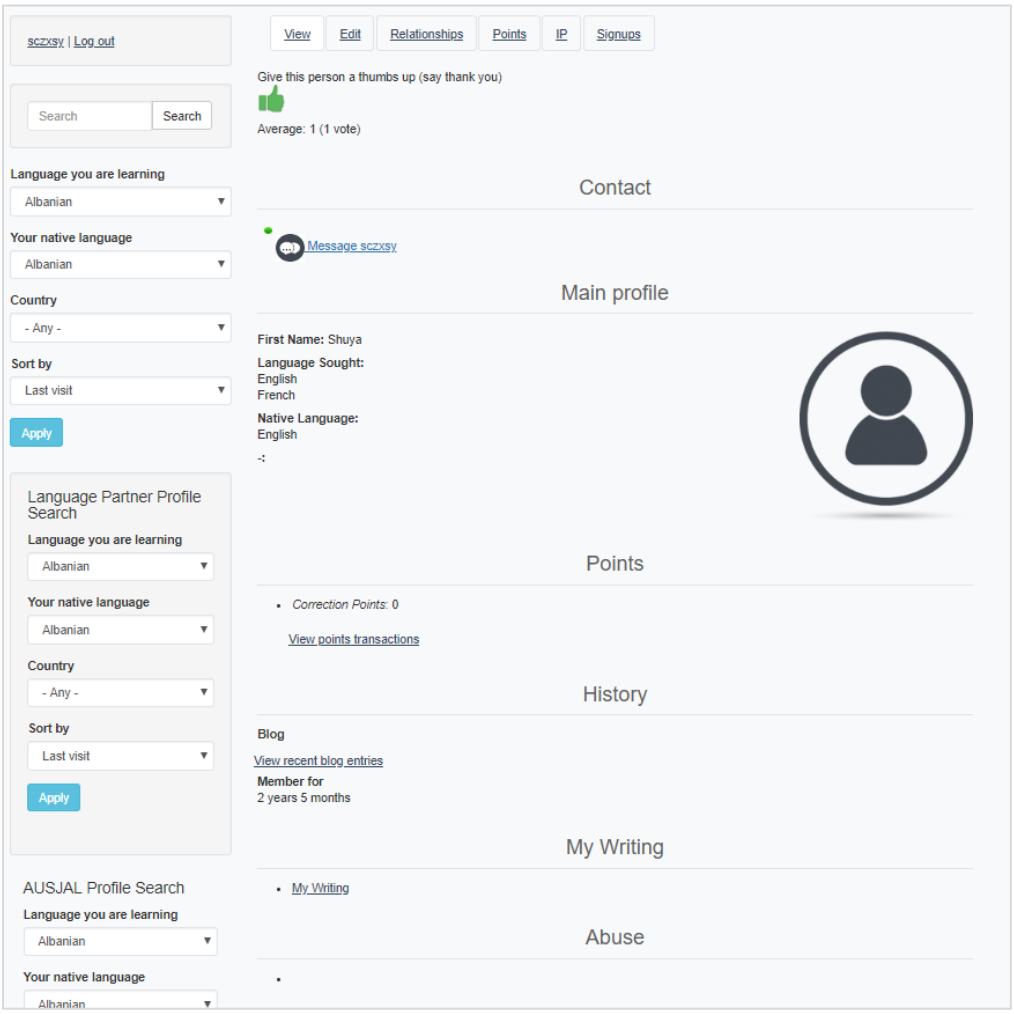

Figure 16. User profile page of The Mixxer.

Exchange Activities

The major oral language exchange activities take place on Skype or another messaging tool of a user's choice, which is beyond the supervision of The Mixxer website. However, learners can exchange their writings and receive corrections from someone from the Writing section on The Mixxer.

Writing and corrections. The Writing section has four pages: (1) Create Writing; (2) Help Others; (3) My Writing; and (4) Thank You. The Create Writing page offers a rich content editor box (see Figure 17) where users can enter their paragraphs, adjust formatting, and submit for correction. They can manage all their writing posts on the My Writing page.

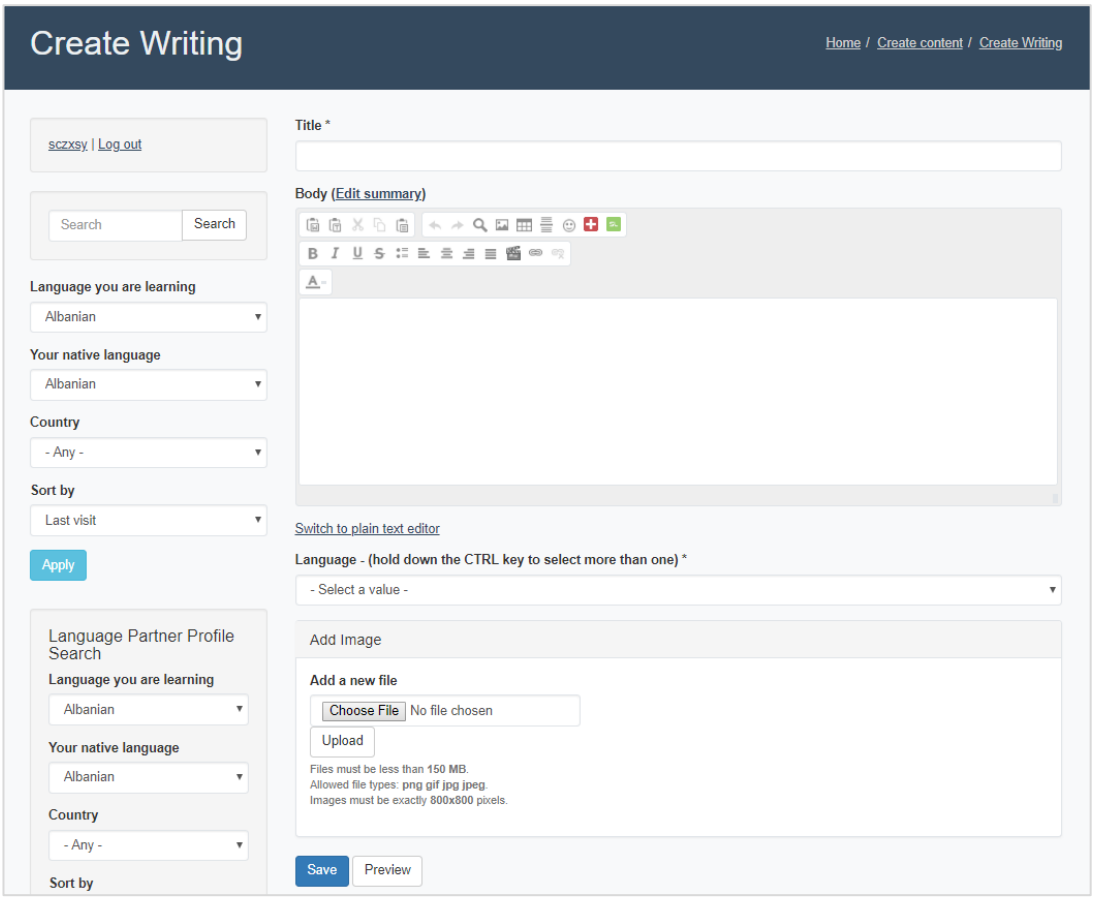

Figure 17. Writing page of The Mixxer.

All submitted writing posts are listed on the Help Others page (see Figure 18) – posts are filtered and displayed based on the language to corresponding native speakers. For instance, English native speakers see a Help Others page full of writing posts in English. From the list, correctors can see the subject of the post, the author, number of corrections the post already received, and the language it is written in. A toggle box "Help, how do I correct someone's

writing?" is located at the top of this page, providing simple instructions for the writing correction procedures. After clicking a post (see Figure 19), the corrector finds two ways to provide feedback. If he/she feels this writing piece is perfect and does not find any mistakes, the corrector can press the "Perfect" Feedback button, which is basically a pre-set comment: "Well done. I think this paragraph is perfect!" Otherwise, the corrector can press the Add Comments button, which opens up a similar rich content editor as on the Create Writing page, with the original writing piece exhibited in the editing area. The corrector can then make edits and mark the changes by utilizing text formatting, such as crossing out the mistakes and typing in correct phrases after the strikethrough.

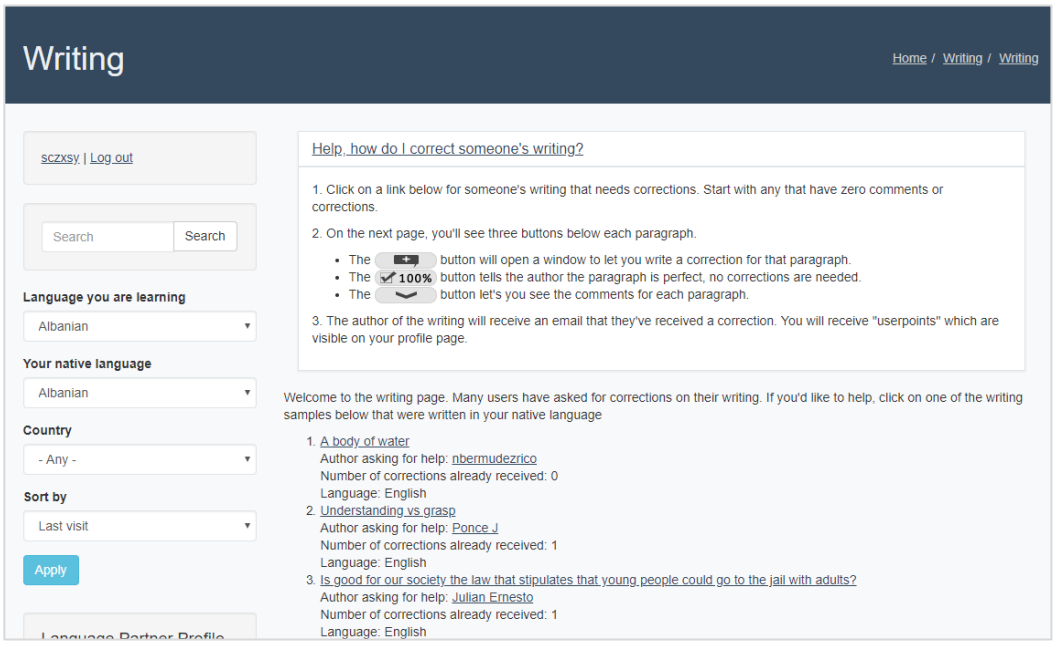

Figure 18. Help Others Page in the Writing Section of The Mixxer

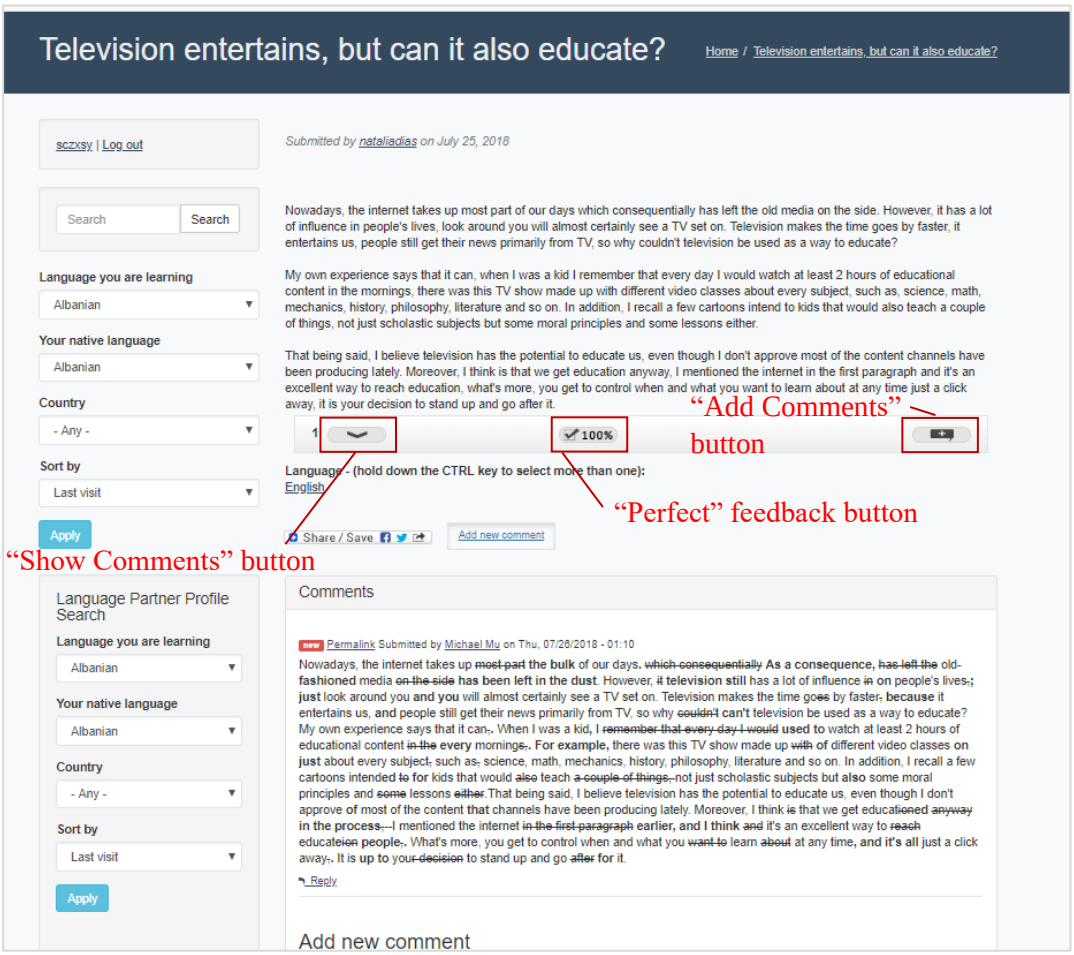

Figure 19. Writing correction page in the Writing section of The Mixxer.

Users earn points for each writing post they correct. As a way to recognize their contribution, The Mixxer has a Thank You page upon which all users and their writing correction points are ranked in a descending order (see Figure 20). The writing correction points also appear in a user's profile.

Exchange structure suggestions. Although Skype exchanges are users' independent activities, The Mixxer tries to provide some ground rules and ideas surrounding exchange structure. On the home, About The Mixxer, and FAQ pages, simple rules are stated as follows:

- The purpose of using this site is for practicing a language, not for dating;
- Be respectful and courteous to each other; and

- Return the favor of writing corrections from others by correcting writing pieces in your native language.

Advice about how to find a partner and successfully conduct language exchanges can be found on the FAQ page and Webmaster Blog as well. These pages suggest that users dedicate half of the exchange time for one language and the other half for the other language instead of switching back and forth, which explains some of the interaction patterns as reported in Chapter 5.

In addition, the Lessons section was created in the hope of providing users with learning materials and activity ideas for their exchange. All lessons are open educational resources (OER) from other sources, including "LearnEnglish" from the British Council and podcasts from Voice of America. A typical lesson is a series of activities designed based on an audio material (see Figure 21). Learning goals, tips, and language skills to be used are specified in the beginning, followed by a step-by-step description of activities and links to corresponding materials. More open educational language learning resources are introduced to users on the Resources page of The Mixxer, such as an on-screen translation tool (Readlang), pronunciation dictionary (NetProf and Forvu), vocabulary practicing tool (Duolingo), more short lessons from the BBC and the Language Learning Wiki, along with other language-specific resources.

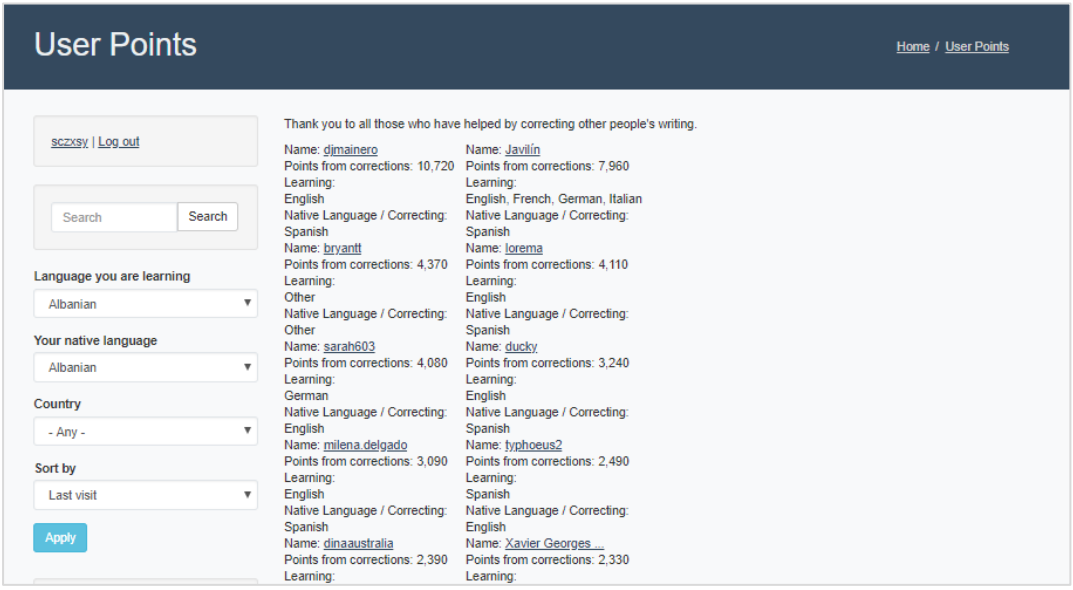

Figure 20. Thank You page from the Writing section of The Mixxer

Other Social Venues

As described before, The Mixxer users connect with each other primarily through the profile search and messaging system. There is also a shared blog space on The Mixxer where all can create blog posts and read and comment on others' posts. A new blog entry is posted every a few days. The researcher conducted a document analysis of 50 posts between April 1st and August 13th, 2018 and found that more than half of the posts were self-introductions and attempted at recruiting language partners. The rest of the posts were mostly sharing writing practice samples without soliciting corrections. A few other posts discussed language learning resources and strategies. Only a few of the 50 blog posts received one or two comments from other users. This shared blog space offers another venue for social interactions, which seems underused, nevertheless.

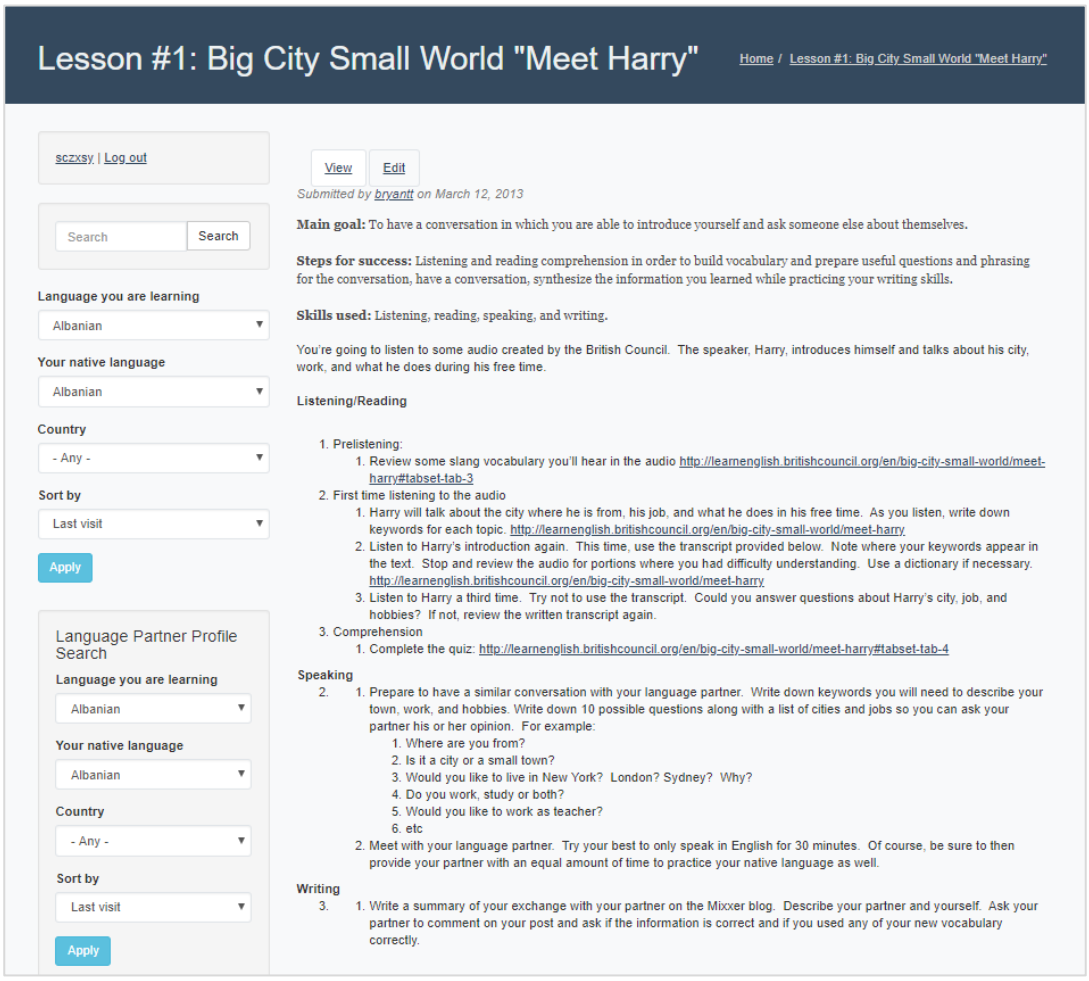

Figure 21. An English lesson page from the Lessons section of The Mixxer.

Findings from Quantitative Data

According to the respondents' answers to survey question 21, 57.53% of the 259 respondents only used The Mixxer website to look for and contact language partners (see Figure 22). The writing correction platform was utilized by 25.11% respondents. In addition, while 11.97% respondents visited the Lessons page, this simple number does not explain whether they studied the lessons alone, or used the lesson structure in their language exchanges as per what the lessons were created for. The additional social venue, blog space, was visited by just 6.18% of respondents, indicating that The Mixxer users might not be keen on communicating in an open, public manner. Only 10.03% respondents used the Become Friends system at The Mixxer,

meaning that even when users had become partners with each other and started language exchanges, most did not "officially" log their relationship as friends on the website. The Become Friends feature seemed unnecessary for the process of establishing language learning partnerships.

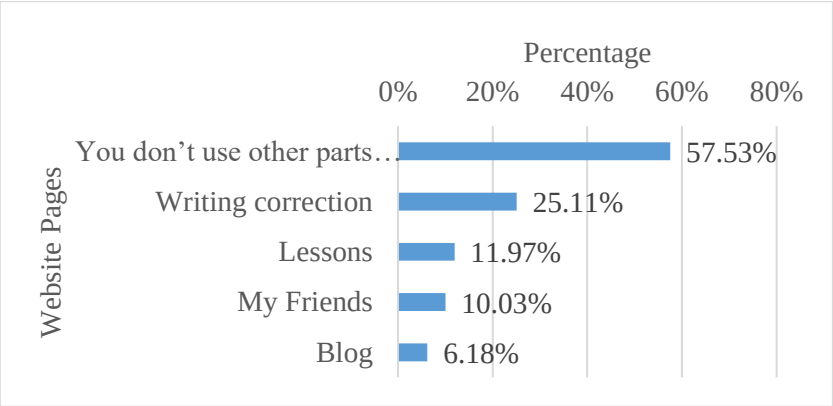

Figure 22. Results of survey question 20, "What other parts of The Mixxer website do you use besides looking for and contacting language partners?" Percentage was calculated based on the total of 259 responses to this question.

Summary of Chapter 4

Chapter 4 answered the first research question, namely "What features of the website support interactions between learners in The Mixxer language learning community?"

The qualitative data from Stage One and quantitative data from Stage Three survey question 20 presented the two major exchange activities at The Mixxer website: (1) conversational language exchange via Skype, and (2) writing corrections. The user profiles, profile search boxes, and internal messaging system enabled users to establish their own presence on the website and look for other users to form language partnerships. The actual conversational language exchange took place on other platforms such as Skype or other tools that users selected. Some parts of The Mixxer website, such as the home, About, and FAQ pages, stated simple ground rules for language partners. In addition, the webmaster blog provided advice about how to find a partner and conduct language exchanges. A series of OER language

lessons were included to provide ideas about the structures of users' language exchange, and 11.97% responses reported using the Lessons section.

Apart from the conversational language exchanges, the writing correction function was employed by around a quarter of the respondents. They were able to post their own written paragraphs on the Write page, which were visible to the native speakers of the language. Native speakers then made corrections by adding a comment below the original post, crossing out the mistakes and typing in the correct phrases. Users earned points for every post they made corrections to. There was also a page on the website displaying the ranking of users' writing points.

Lastly, The Mixxer website offered an alternative open social space, the Blogs, which were only visited by 6.18% of respondents. There, individuals posted simple information about themselves to look for language partners, and sometimes shared their writing samples and language learning resources and strategies.

The most valuable function of The Mixxer website, as many people indicated during the interviews, was to connect language learners and native speakers of different languages from all over the world with a simple profile system. Affiliation with a higher education institute enhanced the credibility of this language learning community.

CHAPTER 5

RESULTS FOR RESEARCH QUESTION 2

Chapter 5 describes the results that answered Research Question 2, specifically "What are the patterns of interactions between language learners in The Mixxer community?" Findings from the document analysis of The Mixxer website records at Stage One, the thematic analysis of the interview data at Stage Two, and survey question 9 through 18 and 21 at Stage Three are included in this chapter.

Frequency and Length of Interactions

Findings from Qualitative Data

Table 8 summarizes the frequency and length of interviewees' language exchange activities, as well as their overall history with regard to The Mixxer membership. People who participated in the interviews had used The Mixxer for different lengths of time, ranging from one month to over eight years. Five of them were relatively new users with The Mixxer experience of less than a year in contrast to the other 11 with more than one year experience.

A number of users had only one or two partners in total, while some dedicated language learners had had more than 100 partners in total. The majority of interviewees kept a number of one to four regular partners for each language they were learning. They usually conducted one to four exchanges every week, with one exception who talked six or seven times every week. Most of their exchanges lasted for approximately an hour. Some people kept their exchange sessions shorter, such as 30 or 45 minutes, whereas others aimed at sessions longer than one hour and a half. Interviewees pointed out that they talked for different frequencies and lengths of time during their exchanges with different partners.

Table 8
Frequency and Length of Language Exchanges from Interview Data

Participant	Membership History[a]	Total Partners	Regular Partners	Frequency of Exchanges	Duration of Each Exchange
NS1	1 year	8	N/A	1 or 2 per week	1 hour
NS2	1.5 years	10	3	1 or 2 per week	1 hour
NS3	8 to 12 months	2	2	2 per week	1 hour
NS4	9 months	4	2 to 3	3 per week	N/A
NS5	5 years	100+	20 to 30	6 to 7 per week	1 hour
NS6	2 years	N/A	2	2 per week	1 to 1.5 hours
NS7	1.5 years	N/A	N/A	1 per week	1 hour
NS8	3 months	10	4	At least 1 per week	1.5 hours or more
L1	1 year	1	1	1 per week	2 hours
L2	4 months	2	2	2 to 4 per week	1 to 2 hours
L3	1 year	3	3	1 to 2 per week	1 hour
L4	2 to 3 months	5	4	3 to 4 per week	1 hour
L5	A few years	2	2	3 per week	1 hour
L6	8 years	Countless	N/A	N/A	1 to 2 hours
L7	4 to 5 years	7	4	2 to 4 per week	0.5 to 1 hour
L8	1 year	6 to 7	N/A	0 to 3 per week	0.75 to 1 hour

Note. 100+ = more than 100; N/A = not available.
[a]The length of time which interviewees have used The Mixxer for.

As language exchange involves the practice of two or more languages, interviewees were also asked about how they arranged their exchange time for languages. The results indicated that most interviewees followed the half-and-half structure as suggested on The Mixxer website. That is, they dedicated half of the time for one language and half of the time for the other without going back and forth. A number of interviewees sometimes went back and forth in languages, or with specific partners. Two people indicated that with one of their partners, they spent more time in one language than the other.

Findings from Quantitative Data

Number of partners. On average, the 396 survey respondents had joined The Mixxer for 28.59 months (SD=26.92). It was surprising to see that 17.42% of them had not found any language partners. The largest amount of respondents (42.68%) had one to four language

partners in total. In addition, 16.92% people had five to eight partners during their whole Mixxer experience. Moreover, 11.87%, 2.27%, and 2.53% respondents, respectively, had a total of nine to 12, 13 to 16, and 17 to 20 partners. A surprising number of people (6.17%) reported having more than 20 partners. The number of all partners each respondent had from The Mixxer is summarized in Figure 23.

According to the findings from the qualitative data, it was not uncommon for The Mixxer users to contact many more people before they settled down to a few partners whom they could have regular exchanges with. Compared to the relatively more scattered distribution of the total number of partners, much fewer individuals had more than four regular partners (see Figure 23). The average number of regular language partners was 1.46 (SD=1.79) for survey respondents. A closer look at the data showed that 35.86% respondents did not have any regular partners. Interestingly, 56.57% respondents had one to four regular partners. Very few people (4.29%) had five to eight regular partners. Even fewer (1.52%) had nine or more regular partners.

A Pearson correlation coefficient of 0.425 (p=0.01) indicated a medium to strong correlation between the length of one's membership to the total number of partners that he/she had. The length of membership had a medium correlation with the number of regular partners (0.337, p=0.01). The number of all partners and the number of regular partners were strongly correlated (0.563, p=0.01). This might be a confirmation of the commonsense assumption that the number of partners was accumulated overtime. It could also suggest that the more one tries, the more likely he/she will find partners for regular language exchanges.

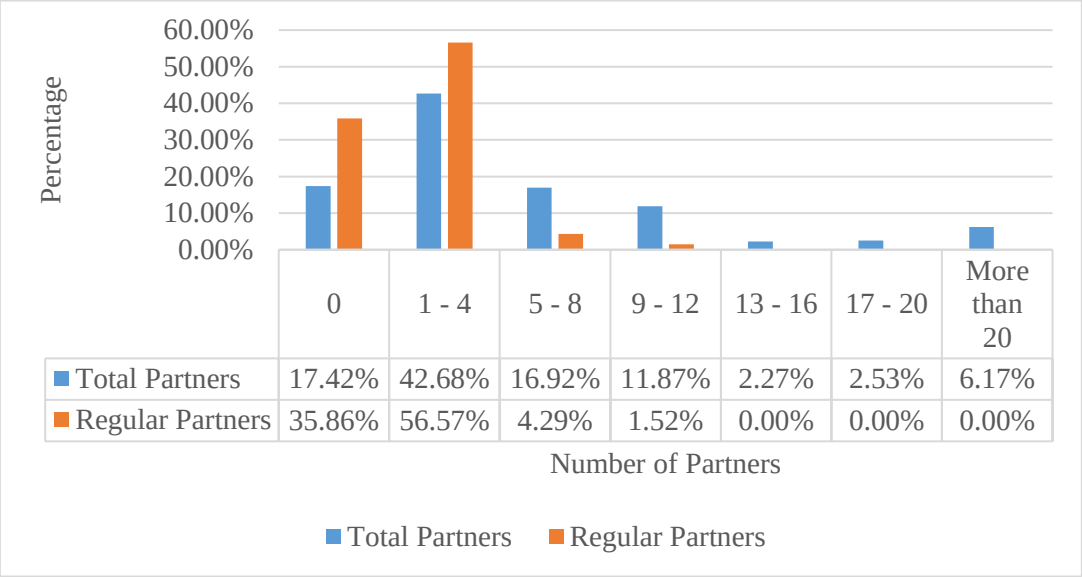

Figure 23. Total number of partners and number of regular partners survey respondents had at The Mixxer. Percentages were calculated based on the total of 396 responses to this question.

Frequency of exchanges. The percentage of respondents who had not conducted any language exchanges was 28.79% (see Figure 24). This number is between the percentage of people with zero regular language partners (35.86%) and the percentage of those who had not found any partners at all (17.42%). A difficulty in establishing partnership and initiating language exchange activities might be inferred from these high rates of having no partners or exchanges, which will be discussed in Chapter 7. The average length of The Mixxer membership for respondents with zero exchanges was 14.50 months (SD=16.70), much shorter than the average membership length of all respondents (mean=28.59, SD=26.92). This fact further supported the speculation that it takes time and efforts for The Mixxer learners to find language partners and successfully conduct language exchanges.

For people who had language exchange experiences, 32.31% of all respondents conducted one or two exchanges each month and 29.56% had exchanges once or twice each week. A smaller amount, 5.56% of respondents, had three or four exchanges each week. Only

2.78% of respondents had more than four exchanges each week. Some degree of correlation was identified between the frequency of exchanges and respondents' native language (Pearson correlation coefficient = -0.181, p=0.01).

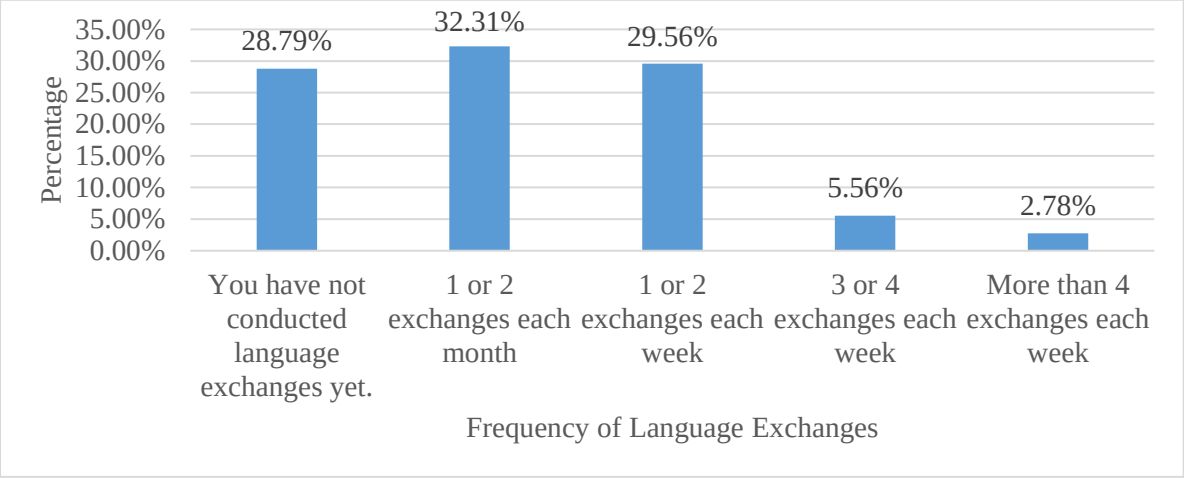

Figure 24. How often survey respondents conducted language exchanges at The Mixxer. Percentages were calculated based on the total of 396 responses to this question.

The 114 respondents who selected, "You have not conducted language exchanges yet", in question 11 were directed to the end of survey. The remaining 282 respondents continued to answer the remaining questions about the interaction patterns, impacts, and other related Mixxer experiences.

Duration of each exchange. The most common duration of an exchange was 31 to 60 minutes on average, with more than half of the 282 respondents selecting this option (see Figure 25). More than one quarter of the respondents usually had zero- to 30-minute exchanges. There were not as many 61- to 90-minute exchange sessions, with only 13.12% of respondents making such selections. Many fewer people had long sessions lasting 91 to 120 minutes (3.19%) or more than 120 minutes (1.06%).

Time arrangement. The results suggested that the most popular way of arranging time during an exchange was to divide the session into equal parts for each language (see Figure 26).

Of the 281 respondents to this question, 59.07% adopted this approach, consistent with the suggested structure on The Mixxer website. Close to one third of the respondents preferred to go back and forth in both languages. A number of individuals (16.37%) attempted to have each person speaking in only one language.

Some others (12.46%) also chose to divide the session for each language, but for different lengths of time. An exemplar case for this choice is that the pair of partners tended to speak in a language that both parties were more comfortable with. As one respondent stated in the comments, “It ends up being mostly the language that is easiest for both parties, specifically Mandarin, since I'm better at Mandarin than they are at English.” This might pose a disadvantage for the learner with lower proficiency in the target language – he/she would have less time to practice the language he/she is learning. Another respondent noted a situation like: “…, he speaks only English to me, and he seems rather pained when I speak French to him, so I don't speak much French, and I'm not learning that much with him.”

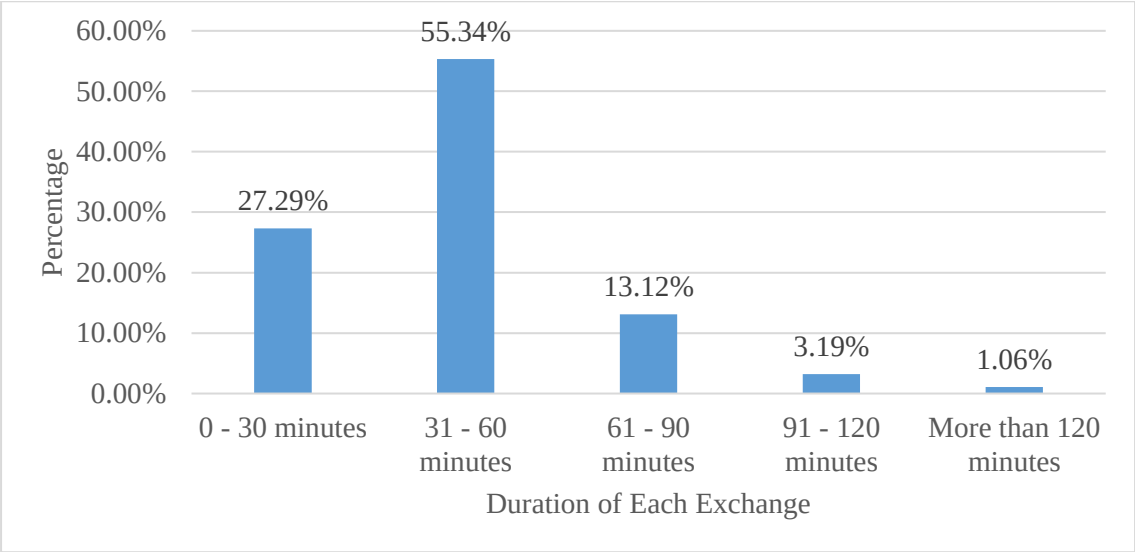

Figure 25. How long each language exchange lasted as reported by survey respondents. Percentages were calculated based on the total of 282 responses to this question.

Lack of practice time was not a concern for a small minority of individuals (1.78%) as

they were practicing the same language as their partners, mostly being English. Another 1.07% of respondents stated that their exchanges were mostly in written format. Some people specifically pointed out that the manner by which time was arranged depended on which partner they were talking to, or their proficiency level in the target language, which was also mentioned by many interviewees at Stage Two.

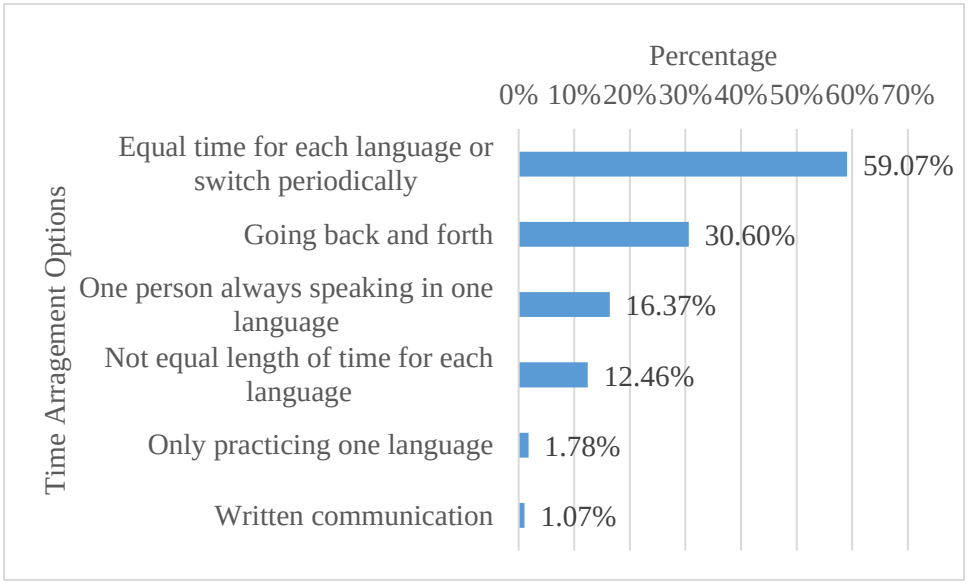

Figure 26. How survey respondents arranged time for each language during language exchange. Percentages were calculated based on the total of 281 responses to this question.

Means of Communication

Findings from Qualitative Data

All interviewees reported using Skype for their language exchange. Eight people mentioned they used WhatsApp with some partners. Furthermore, one person described the request from his partners to use Messenger. Two indicated they preferred Skype over other messaging tools (i.e., WhatsApp, Messenger).

When using Skype, interviewees usually talked via video or audio calls, and type in the chat window simultaneously. This falls into the category of synchronous communication. Exchange on WhatsApp, Messenger, or other messaging tools was occasionally quite different.

Interviewees and their partners more often sent text or audio messages back and forth, which is closer to asynchronous communication. Video or audio exchanges always had a time frame both parties agreed upon beforehand, whereas messaging exchanges on WhatsApp and alike could happen during any time of the day for an unknown period of time, less restrained by people's varied schedules in different time zones. Different affordances of the tools noticeably affected the times when people carried out language exchanges, as well as the content and structure of their exchanges, which will be discussed in the next section of exchange patterns.

Findings from Quantitative Data

Skype was the suggested tool at The Mixxer – as stated on its home page: "The Mixxer is a free language exchange site using Skype by Dickinson College." The survey data confirmed that most people (91.86% of 282) used Skype for their language exchanges (see Figure 27). However, with so many emergent technology options available, many users opted for other means of communication. The most popular besides Skype was WhatsApp. In fact, 30.85% respondents reported using WhatsApp for the exchange. Some respondents (11.34%) also used Facebook Messenger. Line was popular among respondents from Japan (4.60%) or other Asian countries, or for those individuals who had a partner from this area. WeChat was similarly popular among respondents from China (3.19%) or those who partnered with Chinese speakers.

Other computer or smartphone programs for exchange included email, FaceTime, Google Hangouts, Discord, Tandem, The Mixxer website, Kik, and Zoom. One respondent simply made phone calls for exchanges. Another had the opportunity for face-to-face language exchanges. Telegram was the least utilized, but it was interesting that one respondent documented it as his/her means of exchange.

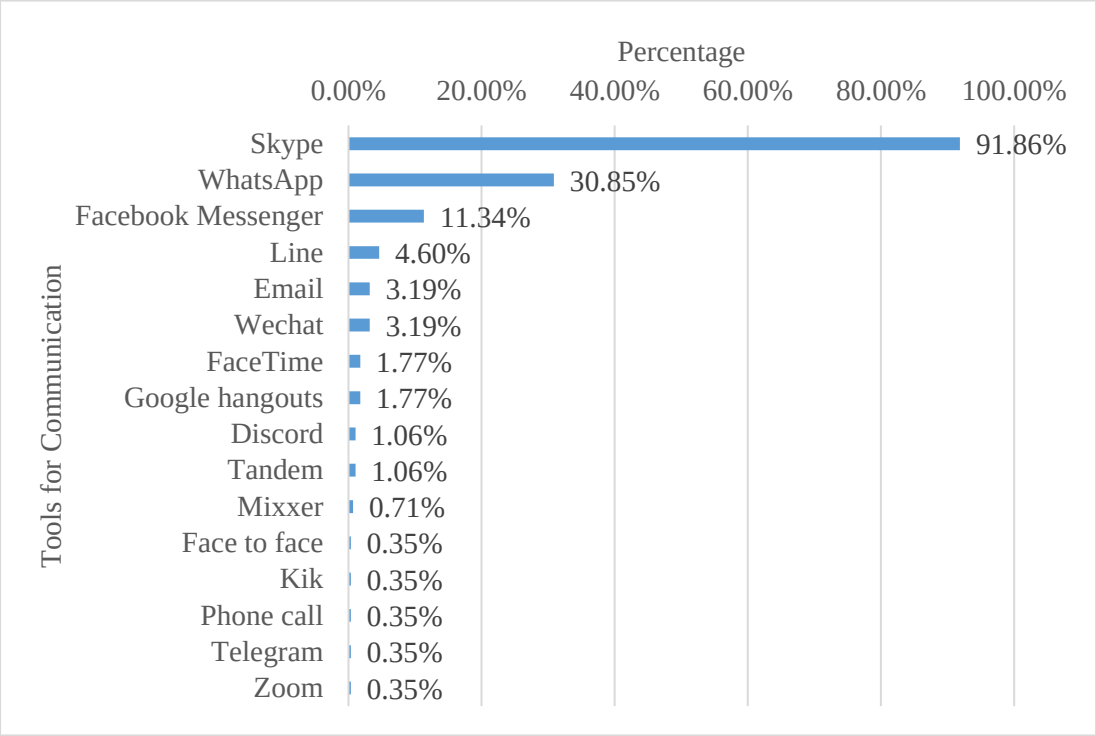

Figure 27. Tools that survey respondents used for language exchanges. Percentages were calculated based on the total of 282 responses to this question.

Exchange Patterns

Findings from Qualitative Data

Structure and activities. Several distinctive styles of language exchange were identified from the interview data, listed subsequently from the least structured to most structured:

- ***Improvised chat.*** Free-form conversation without preparation in advance;
- ***Casual but prepared chat.*** Free-form conversation with the preparation of some topic, news/story to tell, or vocabulary to use;
- ***Series of learning activities.*** Interviewees reported a diverse collection of activities they engaged in with their partners, including going through audio-visual materials (e.g., YouTube videos and podcasts) together, reading an article together, teaching each other some basics of the language, engaging in language exercises, role-playing with scenarios, translating each other's words, and reciting

short dialogue found online. Generally, people focused on the practice of speaking skills, as reported and indicated by the previously described activities. Another interesting activity individuals took part in, as emerged from the interview results, was collaborative writing on Google Docs, thereby concentrating more on writing skills.

- ***Test/task preparation.*** One of the interviewees was preparing for the speaking section of the TOEFL test with his partners. His partners would correct his errors, grade him based on the test rubric, and offer advice. Another teacher interviewee had to teach his subject matter in English sometimes, and thus part of his exchange was a short lesson demonstration.
- ***Formal teaching sessions.*** Interviewees or their partners with language education backgrounds or interests tended to incorporate their formal teaching into the exchange. They either taught the entire exchange session as a regular language class or arranged well-structured materials and activities for the exchange.

When exchanging on messaging tools such as WhatsApp, interviewees reported more cases of improvised chat. Another unique example of WhatsApp exchanges was to send a text, followed by an audio message saying the same thing.

Content and topic. The extensive list of conversation topics between interviewees and their partners seemed to cover all sorts of topics: books, movies, music, sports, and other hobbies; countries or places, cultures, and politics; news, jokes; family, jobs, food, weather, and everyday life; holidays, recent activities and travel/trips; and language learning tips.

Planning and preparation. For exchanges other than improvised chat, varied degrees of preparation was needed ahead of time. It could be as simple as thinking about topics to discuss or

questions to ask. Some people wrote down recently-learned words or phrases that they planned to use in the conversation. Some people prepared audio-visual or text-based materials to either study before the exchange or go through together with partners during the exchange. Such materials included podcasts, radio programs, YouTube videos, online articles, news, textbooks, and so forth. A few others prepared some language exercises for themselves or partners to complete during the exchange.

A small number of interviewees described metacognitive planning behaviors during their exchange. One interviewee used to make an introductory call with each new partner to learn each other's goals and preferred ways of language learning. He also set up an agenda for each exchange by communicating with partners via email or other means in advance. Another interviewee reported selecting learning materials based on their partner's needs. He also asked partners about how they want their mistakes to be corrected, namely by being interrupted immediately, typing the mistake in the chat window, or discussing it afterwards.

Feedback and error correction. One of the important ways people received language input from native speakers was through error correction. Most interviewees confirmed that they corrected each other's mistakes duirng exchanges. The majority tended to correct only major mistakes and ignore minor ones, whereas one interviewee at a more advanced proficiency level in the target language preferred his partners to be more detailed in error correction. Some people only corrected grammar mistakes. One interviewee chose to correct only one type of mistakes with his beginner level partners in order to avoid frequent interruption and feelings of discouragement. Another interviewee expressed a very typical function-based language learning belief and intentionally avoided error correction:

> Actually, you know what, that thing [correcting mistakes] I don't do, because for, for, because I believe that if I keep stopping them and correcting them, they will lose their

> confidence. I, I have studied French when, while I was in Canada. And I never worried about the pronunciation or the accents, never. And then once I learned how to write it and gained mas, a full mastering of the, of the language, then I listened to the radio and spoke with people to gain the pronunciation. I think, I think first you need to learn the language, how to write it, or to speak it and then and then worry about the, the accent or the pronunciation. That's my theory anyway. (NS7, personal communication, January 23, 2018)

There were also different timing choices for error correction. Some people cut into the conversation immediately, some waited till the end, and others still opted to type in the chat window while the other person was talking.

Findings from Quantitative Data

Structure and activities. Eleven of the 13 items in survey question 15 measured the exchange structure and activities (see Table 9). Importantly, 280 respondents rated the occurrence of each statement with a four point scale (0=never, 1=sometimes, 2=often, and 3=always). The results provided evidence that respondents most often engaged in casual chats with their partners (mean=2.08, SD=0.92). Questions and answers about the language was the second most popular activity during exchanges (mean=1.74, SD=0.81). Some simple teaching components were also commonly found among respondents (mean=1.61, SD=0.89). On the contrary, a formal teaching approach was adopted by only a small group of people (mean=0.45, SD=0.70).

There were sometimes translation practices, such as translating the other person's words into the target language (mean=1.30, SD=0.84) or repeating the same sentence in both the native and target languages (mean=1.02, SD=0.77). It was less common for respondents to incorporate other learning materials, like online videos or articles (mean=0.86, SD=0.81), or language exercises (mean=0.64, SD=0.80), into their exchanges. Only occasionally did respondents have the need for language test preparation (mean=0.57, SD=0.77). Collaborative writing (mean=0.56, SD=0.73) and roleplaying (mean=0.37, SD=0.64) were the two least popular exchange activities

among respondents.

Table 9
Results of Survey Items Related to Exchange Structure and Activities

Item	Mean	SD	Count
You chat casually.	2.08	0.92	278
You ask and answer each other's questions about the language.	1.74	0.81	268
You teach each other some basics of the language (words, grammar rules, pronunciation, etc.)	1.61	0.89	261
You translate each other's words into the other language.	1.30	0.84	264
You say something twice in both languages.	1.02	0.77	260
You go through materials together (YouTube videos, articles, etc.)	0.86	0.81	260
You do language exercises.	0.64	0.80	255
You help each other practice for language test.	0.57	0.77	258
You engage in collaborative writing.	0.56	0.73	255
You teach each other languages in a way similar to formal lessons.	0.45	0.70	257
You create scenarios and do role-play to practice the language.	0.37	0.64	257
Total	1.07	0.50	280

Note. These items were from survey question 15, "About how often do you and your partner do the following during your language exchanges?" The rating scale options for this question, Never, Sometimes, Often, and Always, were recoded respectively as 0, 1, 2, and 3.

Feedback and error correction. Two items from survey question 15 asked respondents about the likelihood of providing and receiving feedback and error correction during the exchange (see Table 10). The mean score 1.64 (SD=0.91) suggested that it was a somewhat common practice for respondents to supply each other with feedback. Error correction (mean=1.94, SD=0.86) appeared to happen more often than general feedback.

Table 10
Results of Survey Items Related to Feedback and Error Corrections during the Exchange

Item	Mean	SD	Count
You correct each other's mistakes.	1.94	0.86	273
You give each other feedback about how you are doing with the language.	1.64	0.91	266
Total	1.79	0.77	274

Note. These items were from survey question 15, "About how often do you and your partner do the following during your language exchanges?" The rating scale options for this question, Never, Sometimes, Often, and Always, were recoded, respectively, as 0, 1, 2, and 3.

Survey question 16 uncovered more details about respondents' error correction behaviors (see Figure 28 and Figure 29). Of the respondents, 248 answered this question. It seemed that mostly likely respondents only corrected major mistakes and ignored minor ones (71.37% of 248). Only 15.73% of individuals selected the option of correcting every single mistake. No significant differences were found regarding the types of errors being corrected. Pronunciation mistakes (59.27%) received slightly greater attention by respondents and their partners than mistakes of vocabulary (56.45%) and grammar (52.42%).

In terms of when they corrected the errors, the majority of the 248 respondents (66.53%) elected to tell the other person when he/she paused during the conversation. Many people (42.74%) also utilized the chat window of Skype or other video/audio conferencing tools to offer correction without interrupting the conversation. A little more than one third of respondents told each other at the end of the conversation. A smaller proportion (22.98%) of people would interrupt immediately while the other person was talking.

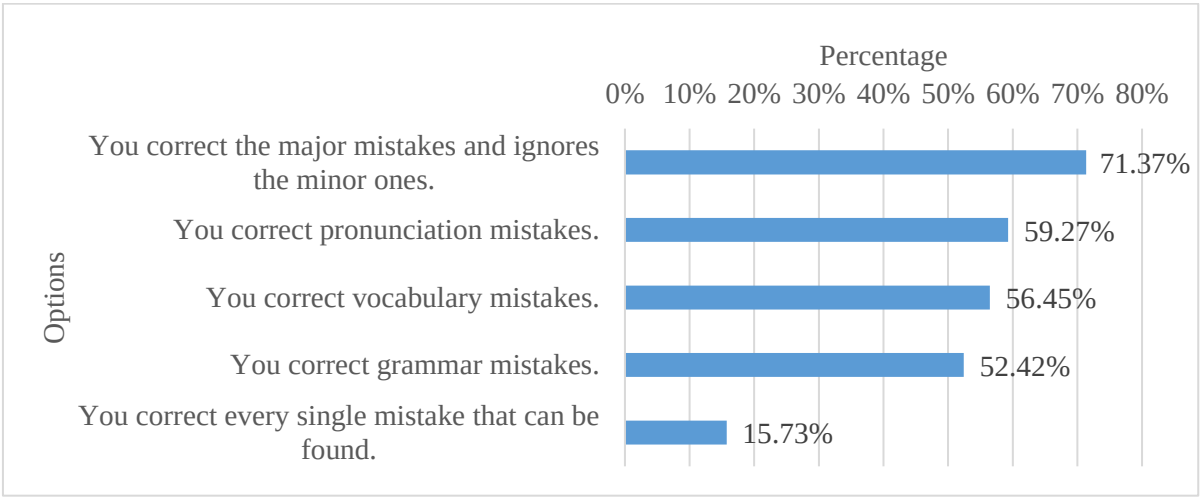

Figure 28. What errors were corrected during the exchange. Percentages were calculated based on the total of 248 responses to this question.

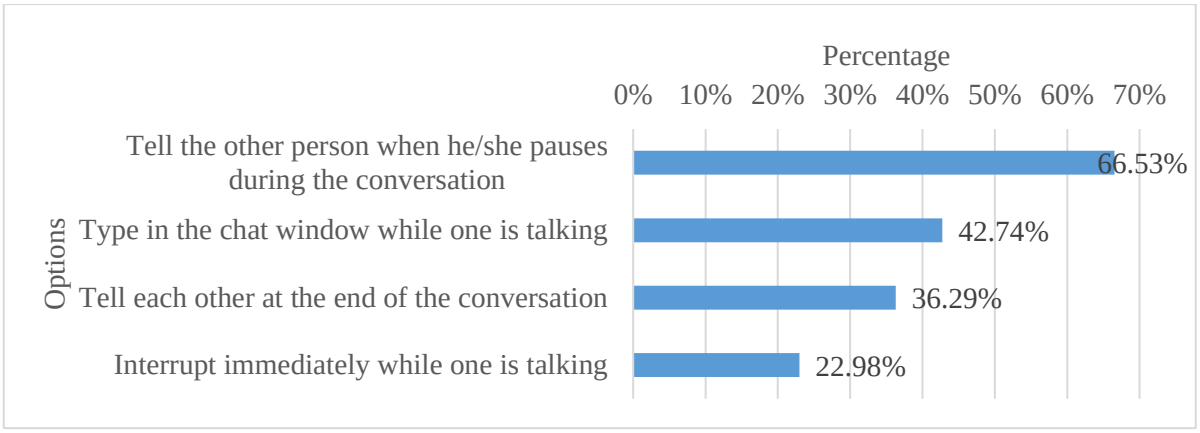

Figure 29. When errors were corrected during the exchange. Percentages were calculated based on the total of 248 responses to this question.

Planning and preparation. The mean score for all exchange preparation items was 0.95 (SD=0.56), which means that overall respondents did not regularly prepare for the exchanges (see Table 11). Respondents did often think about topics or subjects to talk about (mean=1.69, SD=0.92). They sometimes wrote down questions to ask their partners (mean=1.13, SD=0.86) or words/phrases to use in conversations (mean=1.01, SD=0.95). A number of them would communicate about each other's learning goals or methods before exchanges (mean=1.12, SD=0.96), and create an agenda for the upcoming exchange (mean=0.81, SD=0.89). Reading or bringing text-based materials to the exchange also took place occasionally (mean=0.79, SD=0.83). Respondents rarely prepared audio-visual materials (mean=0.48, SD=0.67) or language exercises (mean=0.45, SD=0.69).

Spearman's correlation coefficients were computed between respondents' preparation and the structures and activities of their exchanges. The results are presented in Table 12 with the goal of revealing relationships between these two variables. It was interesting yet not surprising to see that ratings in the casual chat structure had a negative correlation with most preparation items. Respondents who engaged in more casual chats had a smaller need for preparation. All

other identified correlations between structure/activity items and preparation items were positive.

Undoubtedly, people who went through materials together with partners had to prepare either text-based materials or audio-visual materials; those who took part in language exercises during the exchanges prepared the exercises in advance. Spearman's correlation coefficients higher than 0.5 confirmed such assumptions. Respondents with higher ratings of these two exchange activities (i.e., reviewing materials together and completing language exercises) also tended to receive higher mean scores for preparation. Respondents who reported more teaching, either simply teaching basics or in a formal way, and respondents who took part in more roleplaying activities were likely to prepare more on average, as well.

Apart from preparing the text-based or audio-visual materials, respondents who went through materials with partners had some tendencies to prepare agendas or language exercises. Respondents with higher formal teaching ratings showed a stronger tendency to prepare audio-visual materials and exercises than other objects.

Table 11
Results of Survey Question 17 - "As you prepare for the exchange, about how often do you do the following?"

Item	**Mean**	**SD**	**Count**
Think about topics or subjects to talk about.	1.69	0.92	250
Write down questions to ask the language partner.	1.13	0.86	250
Get to know each other's goals and/or preferred ways of language learning.	1.12	0.96	249
Write down words or phrases to use in the conversation.	1.01	0.95	248
Create an agenda or things to do for the coming exchange.	0.81	0.89	252
Read or prepare text-based materials (articles, News, textbooks, etc.)	0.79	0.83	248
Prepare audio-visual materials (podcasts, radio programs, YouTube videos, etc.)	0.48	0.67	247
Prepare exercises for you or your partner to do.	0.45	0.69	247
Total	0.95	0.56	257

Note. These items were from survey question 17, "As you prepare for the exchange, about how often do you do the following?" The rating scale options for this question, Never, Sometimes, Often, and Always, were recoded respectively as 0, 1, 2, and 3.

Table 12
Correlation between Structures/Activities and Preparation Behaviors (Spearman's rho)

		Preparation - Mean	Prep – Agenda	Prep – Goals	Prep – Audio-visual	Prep – Exercises	Prep – Texts	Prep – Topics	Prep – Questions	Prep – Words
Structure – Feedback	Correlation Coefficient	.257**	0.086	.205**	0.097	.165**	.178**	.228**	.142*	.174**
	Sig.	0	0.175	0.001	0.131	0.01	0.005	0	0.026	0.006
	N	250	248	245	243	244	245	246	246	244
Structure – Chat Casually	Correlation Coefficient	-.136*	-0.088	-0.064	-.216**	-.158*	-.158*	0.002	-0.007	-.132*
	Sig.	0.03	0.165	0.317	0.001	0.013	0.013	0.975	0.91	0.039
	N	255	250	247	245	245	246	248	248	246
Structure – Go through Materials	Correlation Coefficient	.475**	.310**	.258**	.419**	.373**	.514**	.240**	.129*	.248**
	Sig.	0	0	0	0	0	0	0	0.046	0
	N	243	243	240	239	240	241	241	240	239
Structure – Word Translation	Correlation Coefficient	.228**	.130*	0.096	.210**	.276**	.272**	.127*	0.065	.143*
	Sig.	0	0.043	0.138	0.001	0	0	0.05	0.318	0.027
	N	245	244	241	239	240	240	241	240	239
Structure – Twice in Both Languages	Correlation Coefficient	.286**	.184**	0.11	.226**	.195**	0.111	.239**	.144*	.212**
	Sig.	0	0.004	0.091	0	0.002	0.089	0	0.026	0.001
	N	242	241	238	237	238	238	239	239	238
Structure – Role Play	Correlation Coefficient	.337**	.218**	.264**	.225**	.280**	.190**	0.117	.208**	.213**
	Sig.	0	0.001	0	0	0	0.003	0.07	0.001	0.001
	N	242	241	238	237	238	238	239	238	237

Structure – Collaborative Writing	Correlation Coefficient	.272**	0.126	.136*	.253**	.295**	.245**	0.068	.148*	.211**
	Sig.	0	0.05	0.036	0	0	0	0.298	0.023	0.001
	N	240	240	237	236	237	237	237	236	236
Structure – Q and A	Correlation Coefficient	.261**	.134*	.210**	0.113	0.032	.138*	.236**	.182**	.158*
	Sig.	0	0.036	0.001	0.079	0.619	0.032	0	0.004	0.014
	N	249	246	243	240	241	242	243	243	241
Structure – Teaching Basics	Correlation Coefficient	.434**	.160*	.340**	.233**	.269**	.245**	.330**	.295**	.282**
	Sig.	0	0.012	0	0	0	0	0	0	0
	N	246	243	240	237	238	239	241	240	237
Structure – Test Preparation	Correlation Coefficient	.213**	.153*	.264**	.186**	.214**	.183**	0.107	0.057	0.049
	Sig.	0.001	0.018	0	0.004	0.001	0.004	0.1	0.381	0.451
	N	243	242	239	238	239	239	239	239	239
Structure – Exercises	Correlation Coefficient	.483**	.250**	.276**	.392**	.518**	.383**	.213**	.234**	.281**
	Sig.	0	0	0	0	0	0	0.001	0	0
	N	241	240	237	236	237	237	237	237	237
Structure – Formal Teaching	Correlation Coefficient	.340**	.182**	.188**	.327**	.344**	.207**	.168**	.237**	.264**
	Sig.	0	0.004	0.003	0	0	0.001	0.009	0	0
	N	243	243	240	239	240	240	240	239	239
Structure – Correcting Mistakes	Correlation Coefficient	.298**	.139*	.242**	0.08	.172**	.183**	.281**	.209**	.232**
	Sig.	0	0.029	0	0.214	0.007	0.004	0	0.001	0
	N	253	248	245	243	243	244	246	246	244

Note. Sig. = significance; Prep = preparation.

** Correlation is significant at the 0.01 level (two-tailed).

* Correlation is significant at the 0.05 level (two-tailed).

Content and topics. The conversations between language partners covered almost all topics one can think of, just as shown in Figure 30. General topics, like cultures (81.89% of 265) and countries or places (81.13%), were among the top three conversational topics, which seemed common within an inter-cultural communication context. Respondents also liked to share their everyday lives (86.79%) with partners, accompanied by more details on matters such as their hobbies (74.72%), jobs (69.81%), families (66.42%), food (66.04%), traveling/trips (63.02%), and recent activities (62.64%). These were followed by items related to their hobbies or recreational activities, such as movies (58.49%), news (54.34%), music (51.70%), books (46.42%), politics (46.42%), and sports (41.13%). With this, more than half of the respondents talked about holidays and weather (both 53.96%) during their exchanges. Language learning tips, the only option related to language learning, was found among conversations of roughly half the respondents. Slightly fewer people (46.42%) were interested in politics. Close to one-third of the respondents had jokes shared during their exchanges. In addition, 12 people (4.53%) commented on other matters they chatted about with partners, from major trends in technology, environment, and economics, philosophical thoughts about religions or the past and future, to more everyday subjects, like pets, relationships, likes and dislikes, and a few other topics. As what some interviewees and survey respondents stated, they discussed topics that they had a common interest in, just like what friends do.

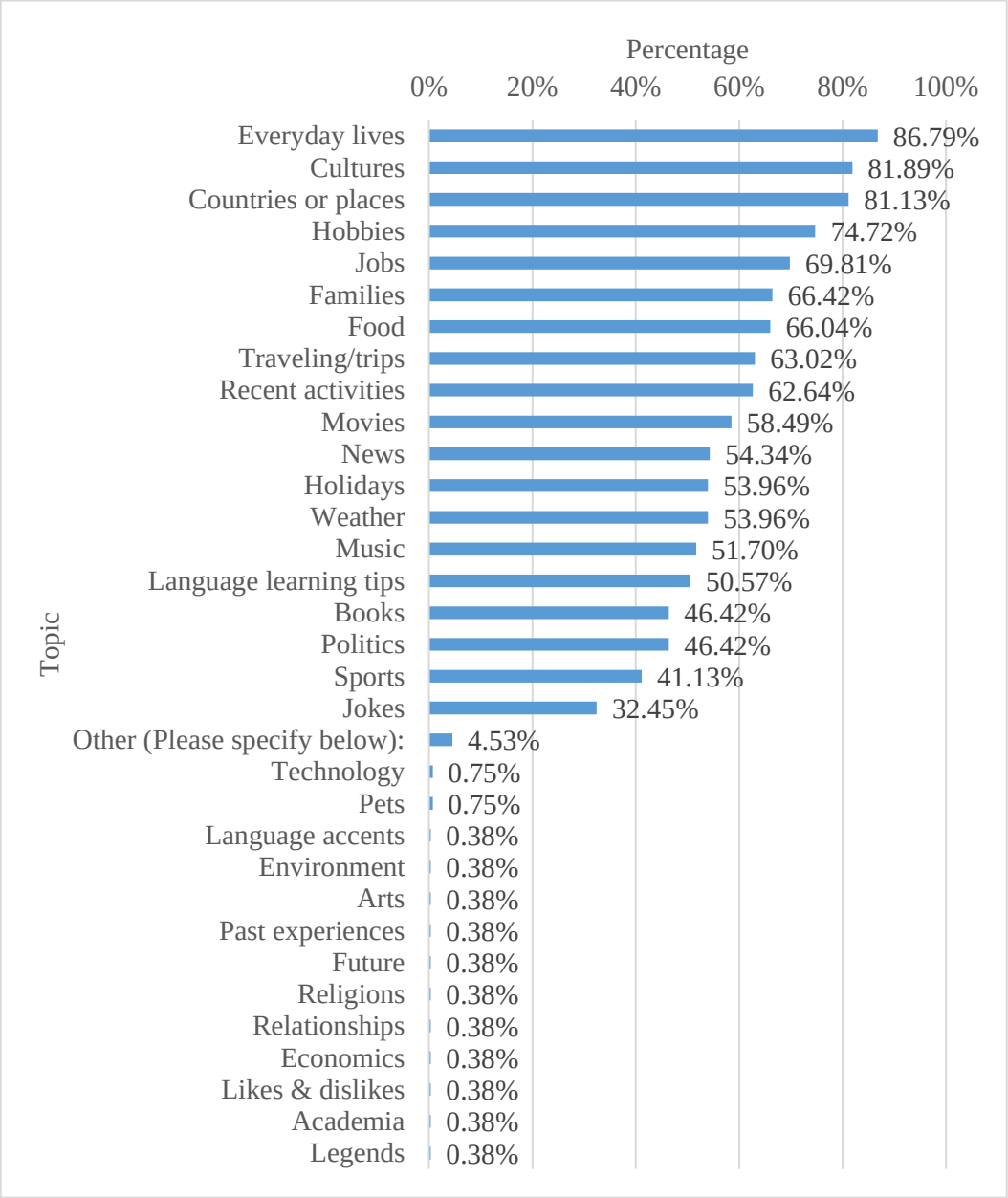

Figure 30. Conversational topics during language exchanges. Percentages were calculated based on the total of 265 responses to this question.

Partnership Preferences

Partnership preferences queries was not one of the original leading questions for interviews. The first interviewee mentioned it at the end of her interview, which reflected her expectations of the interactions with language partners. Therefore, this question was added to the

interview protocol, and eventually became part of the survey questionnaire.

Findings from Qualitative Data

Gender. Most participants in the interviews reported some sort of preferences when they were seeking language partners at The Mixxer. A few female interviewees mentioned that they preferred to talk with other female members, whereas a male interviewee found it more difficult to talk with men than women. Coincidently, The Mixxer administrator, Todd Bryant, mentioned that a new feature had been recently added to The Mixxer, allowing girls/women to be visible only to other female users.

Age, social bonds, and commitment. Some other interviewees expressed preferences regarding age, but for different considerations. Three of them liked to talk to people close to their own age, so that they could find more items in common to discuss and build stronger bonds. Another interviewee sometimes looked for people who were retired and had more time to commit to language exchanges. He also tended to select people who had been members of The Mixxer for more than six months and remained active, regarded as "serious" towards language learning. One more interviewee had similar expectations from partners about commitment to exchanges. He hoped his partners to be available for one or two hours once a week.

Send or accept invitations. Interviewees also had interesting discussions with the researcher about whether they were likely to send partnership requests or accept other's invitations. There was one interviewee who both sent and accepted invitations to form language partnerships. A number of interviewees mostly waited for other people to contact them. This strategy was especially effective for one interviewee who had stated a preferred way of conducting exchanges in his profile. It assured him that the person who sent him invitations agreed upon his method of exchange. Another interviewee found that partners who contacted

him first were more lasting. However, a few others believed that having more people in their contact list gave them a better chance to find someone to talk to in the case of losing partners every few months. One dedicated learner told the researcher that he would message 50 members of The Mixxer once all of his current partners stopped replying to his exchange requests.

Findings from Quantitative Data

Question 21 in the survey asked what the respondents looked for in their partners. Close to one fifth of the respondents did not have any preferences when looking for language partners (see Figure 31). Among the others who had preferences, commitment to language exchange was the most important characteristic that 45.04% of the 262 respondents expected from their partners. A similar amount of people (44.66%) had age preferences. More than one third wanted to find someone they could relate to personally. In addition, greater than one quarter of respondents desired their partners to agree to their preferred format of language exchange. Slightly less than one tenth of respondents paid attention to the length of someone's membership at The Mixxer when establishing partnerships.

With regards to gender, 12.98% of respondents preferred partners to be the opposite gender to their own, while 11.45% preferred partners of the same gender. A Chi-square test of independence showed a significant relationship between respondent's gender and their preference related to the gender of their language partner (X^2 (2, n=64)=6.143, $p<0.05$. Among those who considered gender characteristics, women were more likely than men to look for partners of the same gender (i.e., women), while men were more likely to look for partners of a different gender (i.e., women) (also see crosstabulation in Table 13).

There were 23 comments that added other types of preferences. Four people mentioned looking for someone from a certain time zone, so that it was more convenient to arrange

exchange times. Four others indicated that they selected partners from specific countries. Other people searched for certain educational or professional backgrounds, personalities, a greater number of details in the user profile, goals towards language learning, or language proficiency levels.

Table 13
Crosstabulation of Respondents' Gender and Their Preferences of Partner's Gender

		Preference		Total
		Same Gender	Different Gender	
Gender	Man	11	23	34
	Woman	19	11	30
Total		30	34	64

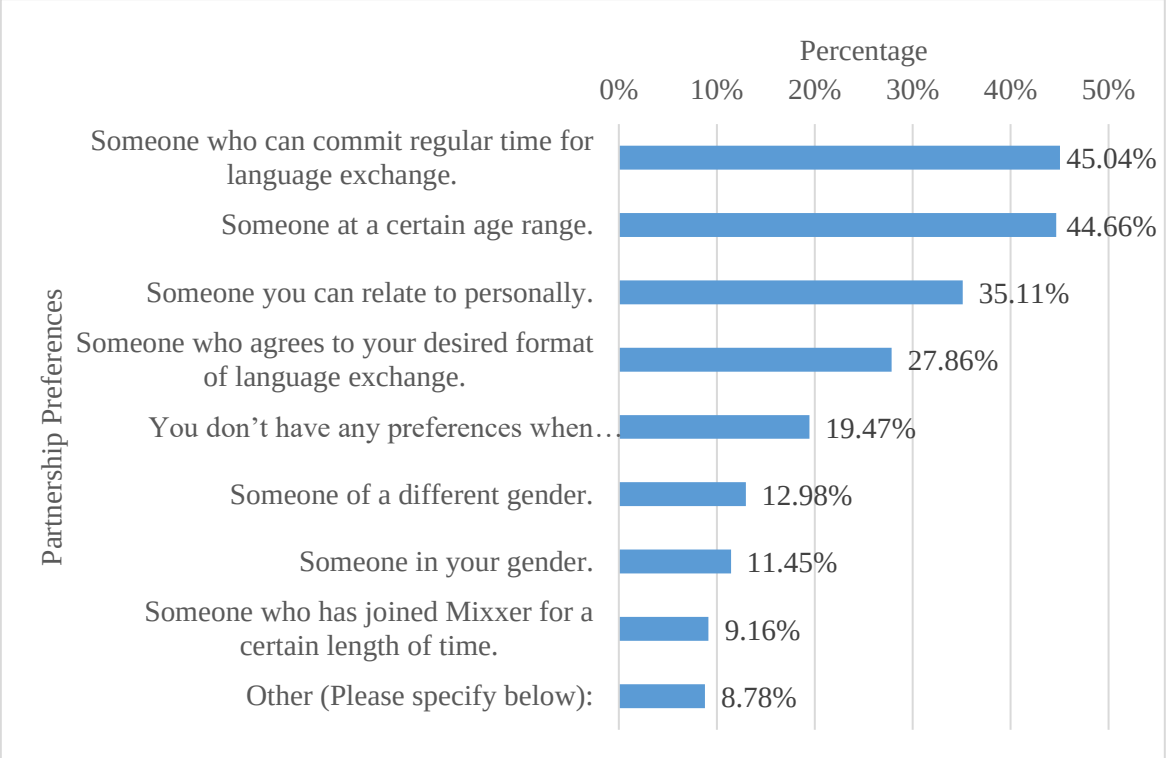

Figure 31. Survey respondents' preferences when looking for partners at The Mixxer. Percentages were calcularted based on the total of 262 responses to this question. Responses that selected both "someone of a different gender" and "someone o your gender" had been deleted from the frequency count of these two options.

Summary of Chapter 5

Chapter 5 uncovered the patterns of interactions between language learners in The

Mixxer community, in terms of when, where, and how they conducted language exchanges. It was somewhat surprising to learn that quite a number of The Mixxer learners had difficulties finding language partners. In fact, 35.86% of respondents failed to establish language partnerships for regular exchanges, and 17.42% had not found any partners yet. More than one quarter of respondents had not conducted any exchanges at the time of taking the survey.

It was most common for The Mixxer learners to have one to four language partners. They usually had one to four exchanges every month. The typical duration for each exchange was 31 to 60 minutes. The majority of people attempted to arrange the exchange time in such a way that it ensured both parties had ample opportunities to practice their target language, by either dividing time into half and half or having each person speak in only one language (possibly the target language). Others went back and forth in both languages, or had their exchanges dominated by one language. How The Mixxer learners arranged timing of exchanges often depended on the partner they were speaking to, and was sometimes influenced by the means they adopted for communication.

The most popular structure of the language exchange was casual chat. Their topics in the chat covered a wide variety of topics, such as everyday lives, countries or places, jobs, food, recent activities, etc. It was also common for survey respondents to ask and answer each other's questions about the language or teach each other some basics of the language, which seemed more spontaneous between language partners. Correspondingly, they prepared topics or subjects to talk about during the exchange, and sometimes wrote down questions to ask their partner or words or phrases to use in the conversation. Other activities that required more planning or preparation, such as watching videos, reading articles, completing language exercises, collaborative writing, and so forth, were incorporated by a smaller number of The Mixxer

learners. Preparation of materials for such activities (e.g., text-based or audio-visual materials, language exercises) was correlatively less common. Respondents provided feedback to each other in general, and very often corrected each other's mistakes during the exchange. They tended to correct the major mistakes and skip the minor ones, and usually chose to tell the other person when he/she paused during the conversation.

The majority of respondents followed the guide on The Mixxer website to use Skype for language exchanges. The employment of other messaging tools was on the rise, however, especially WhatsApp. The qualitative data showed that messaging tools had some unique affordances compared to exchanges via video/audio chat. Exchanges by messaging were asynchronous in nature, and could last for longer periods of time. In addition, more written communication might be involved.

Two major themes, commitment and interpersonal bonds, emerged from The Mixxer learners' partnership preferences. Many learners expected someone who could commit regular time for language exchanges. A significant number of people had age preferences. Further, some others looked for partners who had traits that would resonate with them. Among the small group of learners who expressed preferences about gender, both women and men demonstrated some tendency to choose women as their partners. Roughly one-fifth of survey respondents did not have any preferences when looking for language partners.

Underlying these interaction patterns are the important elements of an online learning community, namely social presence, cognitive presence, and teaching presence. These three presences in The Mixxer community will be further analyzed in the following chapter.

CHAPTER 6

RESULTS FOR RESEARCH QUESTION 3

Chapter 6 reports the findings from document analysis of the website records at Stage One, content analysis of the interview data at Stage Two, and survey question 15, 17, 19, and 22 at Stage Three. These findings answered Research Question 3, namely "What format do social presence, cognitive presence, and teaching presence take in this informal self-directed language learning context at The Mixxer?"

The CoI framework was created within a higher education milieu, and was found to be mostly applied in asynchronous formal online learning settings (e.g., computer-mediated conferencing based courses) in published empirical studies. In such an informal online language exchange environment at The Mixxer, with an emphasis on one-on-one synchronous social interactions and a high level of self-directedness, the three presences of the CoI framework had demonstrably unique formats.

Findings from Qualitative Data

Social Presence

Social presence was beyond doubt the most visible element of interactions among The Mixxer users. The analysis of qualitative data provided abundant evidence for the affective expression and group cohesion categories of social presence, and some examples of open communication.

Affective expression. The majority of interviewees had reported self-disclosure behaviors, such as sharing personal life experiences and interests with their partners. There were also exchanges of cultural knowledge and some use of humor. For example, one interviewee exchanged jokes with an individual in the Writing section of The Mixxer:

> And I was trading jokes with one guy where he would write a joke in English. Then I would try to figure out what he was saying and correct it and then I would write it in Spanish and send it back to him. That was pretty fun. (NS2, personal communication, January 12, 2018)

Many interviewees pointed out friend-like conversations or relationship with their partners. One of them commented that,

> I think beyond what I've already said is just, it's like, there's a lot of personal chemistry. The people, you know, it's just... people just seem to like one another I think, even, even this kind of distance. That's probably one of the main things. (NS6, personal communication, January 17, 2018)

Some of the interviewees exerted extra effort to learn about their partners/friends:

> I always try to spend an hour reading newspaper, or something about where they live. Just maybe the Wikipedia article about their city. If it's their new person. The person who I do most regularly with, I been talking to for a year. We both read each other's newspapers and talk about current events that are happening in our mutual locations. (NS6, personal communication, January 17, 2018)

> I am 50 years old and I forget very fast. So I take notes for example, the sports, music, etc. Because if I repeat with this person, I know things of her or his life in order to not repeat again and again the same. (L8, personal communication, June 19, 2018)

Some interviewees mentioned that their exchanges had even led to physical visits to the partner's location.

> And I have a lot of friends now, from like, through using language exchange. And some of them are, some of them actually came to India because of my, my communication with them. (NS5, personal communication, January 16, 2018)

> And this is my, the person who I have most close relationship. Because I have, in July we travel to London, and we are staying in her home. In October, she came with his, with her husband here to Valencia. And they are stay here in, in Valencia. … We share the same hobby. It's running. Yeah. When I went to London, we run together a race there. And in October, she came here to run the Valencia's half marathon. (L7, personal communication, January 23, 2018)

It is exciting to see an online language exchange partnership developing into an offline friendship, a truly outstanding example of social presence in the online community.

Social presence in a community of inquiry is important to the cognitive development of

learners (Garrison, 2007; Garrison et al., 2000). It is even more crucial in this language exchange community. Strong social bonds are not only motivating or encouraging: “I think that with friendship, it helps me feel more comfortable when speaking” (NS1, personal communication, January 15, 2018). “So now with The Mixxer, I found these partners. They just, encouraged me. They are encouraging me to, to improve English proficiency” (L2, personal communication, January 12, 2018). For some people, it is also the basic requirement for continued partnership and language learning: “I really just prefer the talking with someone that I enjoy talking with” (NS1, personal communication, January 15, 2018). “I only got that with, to someone, if we started to talk and if we have a very good relationship or good feelings, we continue” (L7, personal communication, January 23, 2018). “I usually prefer to talk to somebody around my age. As I don't feel very comfortable talking to people who are much older. It’s just because I think there are not many topics we can discuss” (NS4, personal communication, January 16, 2018).

Open communication. For the open communication category, various interviewees provided examples for risk-free expression: “It definitely helps to have, like, another person who's kind of working through the same thing that you are. So it's almost OK to fail in front of them” (NS8, personal communication, January 18, 2018). “… in a context outside of my academic circle where I may feel less free to make mistakes” (NS1, personal communication, January 15, 2018). Compliments were found in the community, such as sharing with the other person, “your English is so good”, during the exchange and comments in the Writing section or under some blog posts stated “well done,” “good job,” etc. Expression of appreciation was also found in comments under blog posts.

The CoI framework described open communication as “reciprocal and respectful

exchanges" with two examples, "mutual awareness and recognition of each other's contributions" (Garrison et al., 2000, p. 100). It is simply hard to imagine the absence of mutual awareness, one important component of open communication, in the communication between just two language partners, although no data were found as direct proof. A number of features of The Mixxer website were designed with the objective of recognizing user's contributions, including the thumbs up/thank you button on each user's profile and the User Points/Thank You page in the Writing section. By pressing the thumbs up button, The Mixxer users can show their appreciation for another user. The User Points page displays a ranking of users based on points they earned from correcting other's writings.

Group cohesion. The development of friendship as described earlier was also a good indicator of the group cohesion category. Friendships in the community had far surpassed the basic level of group cohesion indicators, such as phatics and salutations (greetings, closures, etc.), vocatives (addressing participants by name), or addressing the group as "we," "our," or "us." The friendship in language exchange was also more purposeful than pure social relations. Many interviewees stated that they were meeting people with the same objective: "And also it's like, it's getting you to meet people with the same objective" (NS7, personal communication, January 18, 2018). "It definitely helps to have, like, another person who's kind of working through the same thing that you are" (NS8, personal communication, January 18, 2018). "I can see they, they like to learn or improve the Spanish. So, for me, it's very, very good. It's rewarding or ... [word cannot be recognized]. Because for me, I feel, I feel the same for English" (L8, personal communication, June 19, 2018).

With the same objective of language learning, some interviewees identified themselves as helpers or co-learners as opposed to teachers: "Like some of them helped me more than I helped

them. Some of them is equal exchange and others, it's, em, I helped them more than they helped me" (NS8, personal communication, January 18, 2018). "Teaching is, is an important word. I am exchanging, trying to help them, you know, giving some correction" (L4, personal communication, January 20, 2018). "Yes, I guess I thought about it longer. I would consider myself being a very efficient language learner for them [my partners]" (L6, personal communication, January 27, 2018).

Collaboration was a common practice between partners to achieve their language learning goals. They taught each other some basics of the language and corrected each other's mistakes. Some interviewees collaborated with their partners to plan the activities for each exchange. Two of them, happening to be a pair of partners, did mock language tests with each other, one being the test taker and the other administering the test and evaluating her partner's performance. Two other creative examples of collaboration between language partners included collaborative story writing and roleplaying within crafted scenarios.

Another interesting phenomenon to note is the mismatched objective for relationships between partners, the opposite of group cohesion. According to the interview data, people's language exchange and language learning was driven by varied motivations, from an interest in the language, the culture, or the places where the language is spoken, to the enrichment of personal life, connection with diverse parts of the world, and the seeking of more advanced academic resources or career opportunities. Other than these common driving forces, a number of interviewees reported encountering people with different pursuits in the language exchange:

> It seems that many people on websites of language exchange are actually lonely and they want someone to talk. So and so the language exchange actually kind of background, background story for them to find new person to speak, maybe flirting, new, finding a romantic partner, romantic chat. So I have very difficult time, I have very difficult, I have many difficulties, sometimes in understanding what the person's actual motivation is. (NS5, personal communication, January 16, 2018)

> There was one lady from Canada, but it was really useless, because she wanted just, you know, I was sorry for her, but she wanted just to, to feel less alone, but then she was always very busy and then she was never correcting my English. And she had a very low level of Italian. And if they don't have a... you know, if they don't speak at least a little bit, it is a big mess to all. (L4, personal communication, January 20, 2018)

Learners with stronger commitment to language learning found such situations deviant from the goals of The Mixxer community. It is definitely one of the challenges that interviewees confronted in their language exchanges at The Mixxer, and may be common on other language exchange platforms, as well, as implied by interviewees who registered at multiple language exchange sites. Without a common goal or mutual commitment, language learning through exchange is hard to continue.

Cognitive Presence

Triggering event. Sense of puzzlement, one of the indicators of a triggering event, was found frequently from interview data in the format of asking questions. It seemed a natural practice for people to ask their partners when they did not know a word or phrase in the language. Posing questions was an important way for most interviewees to receive authentic input from native speakers.

Exploration. Interviewees were found to engage in exploration by exchanging information with partners or studying materials on their own. Some people prepared materials, like articles or videos, for each other to read or watch:

> And sometimes another way, my partners find some articles and then they show me the articles or a video. And then. I, for instance, if it is an article, I read it. (L5, personal communication, January 20, 2018)

> And then I would have a text, maybe from the New York Times or maybe some other texts, maybe some scientific article or so, or some Guardian newspaper. Maybe a British, was it a British or American newspaper, or magazine, and then we go through that text. (L6, personal communication, January 27, 2018)

Or they studied language knowledge on their own: “When it comes to Russian, since I'm

still in the process of learning rules, grammar rules and vocabulary, I also use like, whatever free language learning websites I can find to help me build up that foundation in Russian" (NS1, personal communication, January 15, 2018). "Because, see, it's not everybody is a teacher on language exchange. So. They wanted to try to help. They can hardly teach me grammar. So I started studying grammar myself" (NS5, personal communication, January 16, 2018).

Some The Mixxer learners also tried to immerse themselves in the language by reading or listening to the language on a regular basis. Popular activities included reading books, news, or other online articles, watching movies or online videos, listening to music, listening to podcasts or radio programs, and listening to audio books. One interviewee also switched the operation language on his digital devices to the target language:

> You have to indulge your mind in all way, in all kinds of different ways of picking up the language. So what I did is I switch my software, my, what do you call it, I switch the language on the computer, the operating language. I change language of my mobile phone, and I would have changed the language of my other device if I had other devices. (L6, personal communication, January 27, 2018)

These are also examples for the exploration of language knowledge in an informal manner.

Integration and resolution. In some senses, language learning through exchange is a more holistic process than many other types of practical inquiries that CoI learners engage in. Perhaps owing to the nature of the learning content – language, learners' cognitive processes did not align with the distinct four phases of practical inquiry, namely, triggering event, exploration, integration, or resolution. The third phase, integration, was often found intertwined with exploration or resolution within the exchange process. Just as Garrison et al. (2001) pointed out, "this phase [integration] is the most difficult to detect from a teaching or research perspective (p. 10)." When learners were having a conversation with their partners during the exchange, they were able to receive language input from their partners and internalize either as new information

or as a correction to their current knowledge (exploration and integration), and use the words or structures that they recently learned from various sources to express their meanings (integration and resolution).

> And then I can, what I do at the end of the conversation is I copy the whole conversation and put it down, and then I take notes, so that I have something I can go back to and look at a certain sentence structure, or look for certain words especially vocabulary. (NS3, personal communication, January 15, 2018)

> I usually have like a small book of like maybe Spanish verbs that I usually have to use that I need to make sure that I have on hand. (NS8, personal communication, January 18, 2018)

> Or if I think nothing happened, nothing newsfully happened, then I just retell a story from one of those radio podcasts I listen to every week. And then it's very interesting I just try to recall as exactly as I can. And that would be an exercise to, you know, train the language proficiency. (L6, personal communication, January 27, 2018)

Some interviewees practiced writing in the target language on their own or with partners, which is also an integration of new knowledge and a path towards resolution by applying new ideas in practice:

> So in Spanish every week I write, like two to five pages some kind of essay or something like that in Spanish. And I almost always put it on the website. … As normally you know people just put a paragraph or a sentence up. But I'll put like two pages up. So not too many people want to go through the whole thing. But. For period certain people get interested in helping me for a while. And I was trading jokes with one guy where he would write a joke in English. Then I would try to figure out what he was saying and correct it and then I would write it in Spanish and send it back to him. (NS2, personal communication, January 15, 2018)

> Or maybe they help me write a story in English. So I write a sentence, and then they put in a sentence. Or maybe it's Philip K Dick. Just ending a thought, just coming up with the thought, putting something down in a shared Google document, document, I don't know what you call it, the Google cloud. And then I give them the link. They can type in something. I type in something. And they correct my English, and then they come up with their perfect … [words cannot be recognized]. And then I put, the, put together a story. And we alternate on writing sentences. That's a very good technique. And we have perfect stories coming out of this. (L6, personal communication, January 27, 2018)

Teaching Presence

At The Mixxer, everyone is a learner, and everyone is also a teacher. Although many The

Mixxer users did not identify themselves as teachers, many indicators of teaching presence existed found within the community, reflected by learners themselves.

Design and organization. Plenty of design and organization of language exchange activities were found from the interview data. First of all was the "establishing time parameters" indicator, referring to the mutual efforts of scheduling a time for the upcoming exchange in this community.

As self-directed learners, The Mixxer users most likely must design methods or activities for their language exchange and learning. The diverse collection of interaction formats in the exchange, as reported in Chapter 5, were the products of their own design. Various people had a strong preference for the exchange structure, and stated that before establishing partnership with other people:

> I like to talk in the learning language. I asked the people that I work with to speak in English, my language and I will translate what I think they're saying in English, and say it in Spanish. And when I speak about the weather or something, if, if I start a subject I speak, always try to speak in Spanish, and ask them to both translate and correct me. … I say that in my profile on Mixxer. If you look at my profile which tells about, has a place 'describe yourself' and a little description about what you're looking for. I, I have that spelled out on there that you know, I like to do that in that manner. ... So I usually, most of the people I have worked with, I wait for them to contact me. And there, there are usually people that have read that and think that's, that's a workable idea for them. (NS6, personal communication, January 17, 2018)

Others tried to understand the preferences of the other person, and design activities accordingly. One of the interviewees even set up a detailed agenda for each exchange by communicating with partners beforehand. They also prepared learning materials for partners and themselves, such as YouTube videos, online articles, podcasts, language exercises, etc. Interviewee L6 reported preparing materials based on a partner's proficiency level and needs:

> I have this folder for German, my German material, my German links. And then I will, German learners told me would be an effective way, would be an effective way to learn. So there's my link collection and my sources. I will ask what level they are. I will just ask, say something in German. I would find out very quickly where they are in German.

> And I would, according to their needs, I would test the source material and then usually that turns out really nicely and they like it. Usually they like a lot. (L6, personal communication, January 27, 2018)

Interestingly, some learners played more important roles in the design and organization aspect than their partners. NS2 thought that he had more time as a retired person than his working or studying partners who were working or studying, so he prepared for activities to complete during the exchange. Others might be more experienced in self-directed language learning than their partners, and, therefore provided more materials and resources, or were more proactive in designing the activities for their exchange. This observation, in some way, reflected the learning presence construct proposed by Shea and Bidjerano (2010, 2012). Motivation, self-efficacy beliefs, and awareness and use of appropriate learning strategies, as important components of learning presence (learner self-regulation), were evident in the present study. A series of webmaster blog posts on The Mixxer website were also made available with the aim of assisting the design and organization of language exchanges, including tips on how to find a partner and conducting successful exchanges, along with other language learning tips and resources. It was just unclear the degree to which these blogs had been read and utilized by The Mixxer users.

Facilitating discourse. Facilitation of discourse was not identified from the qualitative data. This was perhaps partially based on the lack of direct observation of the exchange process, and partially based on the fact that the exchanges were conversations between two people where probably less facilitation was needed, in contrast to the common CoI context of computer-mediated conferencing classes.

Direct instruction. One important element of language learning through exchange is the language input from native speakers. A major format of native speaker input was presenting content, an indicator of direct instruction. In The Mixxer community, native speakers presented

content by teaching some basics of the language to their partners, or by answering partner's questions during the exchange:

> For example, I had like a list of things that I knew that even if their English was pretty good that they wouldn't know how to, they wouldn't know how to say. Like, like instead of saying 'yes' I would say 'you bet' or something like that, hehe (laugh), and they go 'what?' Or instead of saying 'I think', I would say 'well I figure that blahblahblah'. And they will go 'what?' you know. So I teach them that we say 'I figure' a lot, you know, that sort of thing. (NS2, personal communication, January 15, 2018)

> I had to buy a grammar book to try and teach myself so I could try to explain it to him. (NS3, personal communication, January 15, 2018)

> And the other thing is pronunciation, especially for the English learners. As you know, as you know that's crazy in English. And. I always try to teach using rhyming words. Like if they're having trouble saying the word hair. I talk about words that rhymes with, like bear or fair. I think that helps people with, with the pronunciation of English. (NS6, personal communication, January 17, 2018)

> When I talk with Brent, as Brent is an English teacher. He likes more of a... he has a degree in rhetoric. And so he likes to find out synonyms and similar words, or things like this just to enrich the vocabulary. (L5, personal communication, January 20, 2018)

> Sometimes I, sometimes it's, I want to tell him something. And I don't know how to say in English. I tell him the same thing in the Spanish, and he tells me, it's in English we say that. (L7, personal communication, January 23, 2018)

Another format of language input from native speakers, also an indicator of direct instruction, was assessment and feedback, and particularly, error correction. For the interviewees who were practicing for the TOEFL test, his partner evaluated him during their mock test using the rubric from the TOEFL speaking session. This approach presented a case of relatively formal assessment and feedback practices between language partners. Most of the interviewees reported correcting each other's mistakes in their use of languages during the exchange by focusing on different types of errors at varying times. More details of error correction behaviors were discussed in the Exchange Pattern section of Chapter 5. In addition, the Writing section on the website was an appropriate place for The Mixxer learners to engage in error correction activities. Hundreds of writing samples were posted and corrected each month.

Within The Mixxer community, part of the direct instruction responsibility was fulfilled by someone other than learners. The website administrator, Todd Bryant, was found to respond to technical concerns that users reported, and tried to direct users' posts to the correct place (e.g., commenting under a user's blog post that he/she should post this paragraph in the Writing section for corrections).

Findings from Quantitative Data

The three presences of CoI were reflected in a total of 30 variables from Question 15, 17, 19 and 22 of the survey. As mentioned in previous chapters, questions 15, 17, and 19 were rating questions based on a four-point scale that provided mean scores as results, while question 22 was a multiple response question for which frequencies were counted. The Cronbach's alphas for social presence, cognitive presence, and teaching presence items were, respectively, 0.79, 0.73, and 0.77. Results for each presence are reported in the following by discussing which categories received higher ratings or were selected by relatively more people, aiming at revealing the formats of social presence, cognitive presence, and teaching presence in a descriptive manner.

Social Presence

Overall, the social presence items were found with high ratings (see Table 14), which indicated a strong social presence within The Mixxer community. The mean score for items in question 19 was 2.11 (SD=0.55). In addition, item g in question 22 as a repeated measure of friendship between partners was selected in 50.95% responses. The most profound indicator for social presence was the open communication statement, "you find your communication reciprocal and respectful" (mean=2.67, SD=0.6). Survey respondents also often or always felt supportiveness from their partners (mean=2.43, SD=0.71), and comfortable to express personal feelings in conversations (mean=2.15, SD=0.83), reflecting strong group cohesion and affective

expression. The remaining three statements about group cohesion and affective expression were all rated higher than 1.5 on average.

Table 14
Scores for Survey Items of Social Presence

Item No.	Item Description	Mean	SD	Count	Percentage
Affective expression					
19.b	You feel comfortable to express personal feelings in your conversations.	2.15	0.83		
19.e	You have a sense of belonging to this language exchange community.	1.75	0.92		
19.f	You become good friends with each other.	1.73	0.9		
22.g	You made good friends with language partners after the exchange.			134	50.95%
Open communication					
19.a	You find your communication reciprocal and respectful.	2.67	0.6		
Group cohesion					
19.c	You feel that your language partner is supportive for your language learning.	2.43	0.71		
19.d	You find yourself sharing some similarities with your language partner(s).	1.87	0.78		

Note. SD = standard deviation.
For the rating of items in question 19, 0 = Never, 1 = Sometimes, 2 = Often, and 3 = Always.

Cognitive Presence

Eight items from question 15 and three items from question 17, along with four items of question 22, measured cognitive presence within The Mixxer community (see Table 15). The mean score for question 15 and 17 items was 0.94 (SD=0.49), meaning that these cognitive presence indicators only sometimes occurred in the community. Among these cognitive activities, asking questions, as an example of a triggering event, was comparatively more common than other behaviors. The two related items, 15.g and 17.g, were rated 1.74 (SD=0.81) and 1.13 (SD=0.86) on average, respectively.

In contrast to the low score of items in questions 15 and 17, the four items in question 22 were all selected by over 65% of respondents. More than 70% of 263 respondents confirmed that

they had opportunities to practice the language and perceived an improvement in their language skills. Roughly 65.40% of respondents were motivated by the exchanges to continue their language learning. The same amount of people learned about other cultures through the exchanges. These numbers supported the presence of triggering events, exploration, integration, and resolution among The Mixxer learners.

Table 15
Scores for Survey Items of Cognitive Presence

Item No.	Item Description	Mean	SD	Count	Percentage
Triggering event					
15.g	You ask and answer each other's questions about the language.	1.74	0.81		
17.g	Write down questions to ask the language partner.	1.13	0.86		
22.b	Exchange with language partners brings fun to your language learning, or motivates you to continue learning the language.			172	65.40%
Exploration					
15.b	You go through materials together (YouTube videos, articles, etc.)	0.86	0.81		
17.e	Read or prepare text-based materials (articles, News, textbooks, etc.)	0.79	0.83		
22.d	Language exchange enables you to learn about other cultures.			172	65.40%
Integration & Resolution					
15.c	You translate each other's words into the other language.	1.3	0.84		
15.d	You say something twice in both languages.	1.02	0.77		
15.e	You create scenarios and do role-play to practice the language.	0.37	0.64		
15.f	You engage in collaborative writing.	0.56	0.73		
15.i	You help each other practice for language test.	0.57	0.77		
15.j	You do language exercises.	0.64	0.8		
17.h	Write down words or phrases to use in the conversation.	1.01	0.95		
22.c	Language exchange has helped improve your language skills.			203	77.19%
22.f	Language exchange provides you the opportunities to practice the language skills.			193	73.39%

Note. SD = standard deviation.
For the rating of items in questions 15 and 17, 0 = Never, 1 = Sometimes, 2 = Often, and 3 =

Always.

Teaching Presence

Teaching presence was measured in questions 15 and 17, specifically in the categories of design and organization and direct instruction (see Table 16). There were no facilitating discourse items in the survey as no evidence for this category was determined from the preceding qualitative data.

The overall mean score for all the 10 items was 1.15 (SD=0.52). The direct instruction category (mean=1.49, SD=0.59) had stronger presence than design and organization (mean=0.75, SD=0.58). The most typical indicator of teaching presence was error correction behaviors (mean=1.94, SD=0.86), followed by answering questions (mean=1.74, SD=0.81), general feedback (mean=1.64, SD=0.91), and teaching the basics of a language (mean=1.61, SD=0.89).

Table 16
Scores for Survey Items of Teaching Presence

Item No.	Item Description	Mean	SD
Design & organization			
17.a	Create an agenda or things to do for the coming exchange.	0.81	0.89
17.b	Get to know each other's goals and/or preferred ways of language learning.	1.12	0.96
17.c	Prepare audio-visual materials (podcasts, radio programs, YouTube videos, etc.)	0.48	0.67
17.d	Prepare exercises for you or your partner to do.	0.45	0.69
17.e	Read or prepare text-based materials (articles, news, textbooks, etc.)	0.79	0.83
Direct instruction			
15.g	You ask and answer each other's questions about the language.	1.74	0.81
15.h	You teach each other some basics of the language (words, grammar rules, pronunciation, etc.)	1.61	0.89
15.k	You teach each other languages in a way similar to formal lessons.	0.45	0.7
15.l	You correct each other's mistakes.	1.94	0.86
15.m	You give each other feedback about how you are doing with the language.	1.64	0.91

Note. SD = standard deviation.
For the rating of items in question 15 and 17, 0 = Never, 1 = Sometimes, 2 = Often, and 3 = Always.

Summary of Chapter 6

Chapter 6 described the formats of social presence, cognitive presence, and teaching presence within The Mixxer language learning community.

A strong sense of social presence was identified from both qualitative and quantitative data. The Mixxer learners were found to express themselves affectively by sharing their personal lives and experiences with their partners. They were able to build not only rapport, but also strong friendship in many cases. Such rapport and friendship were based on the common objective of learning the languages, which created a sense of belonging to the community. Learners felt supportiveness from partners and were less afraid to make mistakes in front of them.

Many people identified themselves as co-learners or helpers to the other person. Language learning through exchange was largely a collaboration between partners. They taught each other some basics of the language, and corrected each other's mistakes. They also worked together in activities like roleplaying and collaborative writing.

An interesting outlier of social presence was found as the mismatched objective between partners. Various participants expressed discomfort in coming across people with a divergent pursuit in the exchange that was not language learning (e.g., dating). This specific challenge will also be reported in Chapter 7.

Cognitive presence was largely identified from learners' regular language use and practices. Questions about the language, the culture, etc. were often the major triggering event that helped language learners receive authentic input from native speakers. The exploration phase was initiated when they reviewed text-based or audio-visual materials either alone or with partners. It can be as formal as studying with a textbook, or as casual as reading novels or

watching a movie. As to integration and resolution, these two phases were usually interwoven in the process of conversing with partners during the exchange or practicing writing at other times.

Teaching presence was not as evident as social presence in The Mixxer community. However, various indicators and examples had been identified for the design and organization as well as direct instruction categories. Interestingly, it was learners themselves who played a major role in teaching presence. Members of The Mixxer community established the time parameters for their exchanges by communicating with partners. They designed many interesting methods and activities to structure their exchanges. There was also direct instruction in the format of teaching the basics of the language or answering questions from each other. Another format of direct instruction was correcting errors, which had been found from both conversational exchanges and writing correction activities on the website. In addition, The Mixxer website and administrator, Todd Bryant, also fulfilled a small part of the direct instruction duties, such as responding to technical issues or directing posts to correct places.

No examples were discovered for the facilitating discourse category, which might have resulted from the lack of direct observation of the exchange process. This might also suggest that less facilitation was necessary in the one-on-one communication context at The Mixxer.

CHAPTER 7

RESULTS FOR RESEARCH QUESTION 4

Chapter 7 outlines the thematic analysis results of interview data at Stage Two and the results of survey questions 22 to 25 at Stage Three with regards to learners' perceived impact of participation in The Mixxer community on their language learning. Challenges and other language learning efforts are also discussed, so as to present the entire picture of The Mixxer users' language learning experiences.

Perceived Impact of The Mixxer Experience

Findings from Qualitative Data

When asked about the influences they thought their Mixxer experiences had, interviewees made predominantly positive comments. Online language exchange was a completely free service and an extremely convenient and efficient option to find language partners when compared to the time and geographical obstacles of real-life language partnerships. Many interviewees pointed out that The Mixxer had provided opportunities for them to practice languages with other people, and the access to native speakers was especially beneficial. Many of them confirmed that they perceived an improvement in their language skills.

Meeting and talking with someone else regularly increased the confidence of some people in their language capabilities:

> Yeah I find it really really useful. The reason why I registered there was at first because I needed to move to Poland. It was quite, quite an unexpected turn. And I didn't learn Polish for, for a long time before, before moving here. So I was afraid to talk to people on the streets and I really needed to find somebody to practice my talking, in Polish. And Mixxer really helped me in this. That was great. Now I feel fine, really really confident. (NS4, personal communication, January 16, 2018)

For others, it made language learning more fun and motivating. These two interviewees felt more compelled for learning the language when they scheduled exchanges to look forward

to:

> I think during that year I have kept things interesting and that's probably the best thing that it did for me. It's like to meet somebody new or to know that I'm going to have to talk to somebody, so I look up words and I try to learn new words and stuff like that. So I guess it really is, that's probably the best thing it did for me is keep my motivation up. (NS2, personal communication, January 15, 2018)

> It's motivating, to keep going. if you were just studying, if I was just studying completely on my own, I think I would, I would be less motivated than I am when I, I'm looking forward to talking to somebody this afternoon or tomorrow or whatever. (NS6, personal communication, January 17, 2018)

Engaging in exchanges at The Mixxer expanded the experience of language learning to an also enriching cultural exchange. Interviewee L4 made an appealing statement from this point of view:

> But you know, whenever you meet people from another country, it's another mentality, another way of thinking, of, you know, facing the problems. Because we speak of our lives, and so we are learning I think, something more than a language from each other. And this is charming. I really love that. (L4, personal communication, January 20, 2018)

Moreover, some interviewees reported that they had made good friends with their partners. Such friendship had even led to offline visits to a partner's country or home for some of them. More discussion about the friendship can be found in the Social Presence section of Chapter 6.

Findings from Quantitative Data

A total of 263 respondents selected the perceived influences of their Mixxer experiences in survey question 22. All options, except for "Other (please specify below)," were selected by more than half of the 263 respondents (see Figure 32). This suggested that most people recognized the positive impact from their participation in The Mixxer community. Access to native speakers was the most voted-for option (79.08%). The three with more than 70% respondent selection were the improvement of language skills, increased confidence in their own language skills, and opportunities to practice the language. Close to two-thirds people found The Mixxer experience to be fun and motivating, and the same number of people confirmed that language exchanges at The Mixxer assisted them in learning about other cultures. Of the respondents, 62.75% thought it was convenient to engage in language exchange online. Moreover, roughly half made good friends with their language partners.

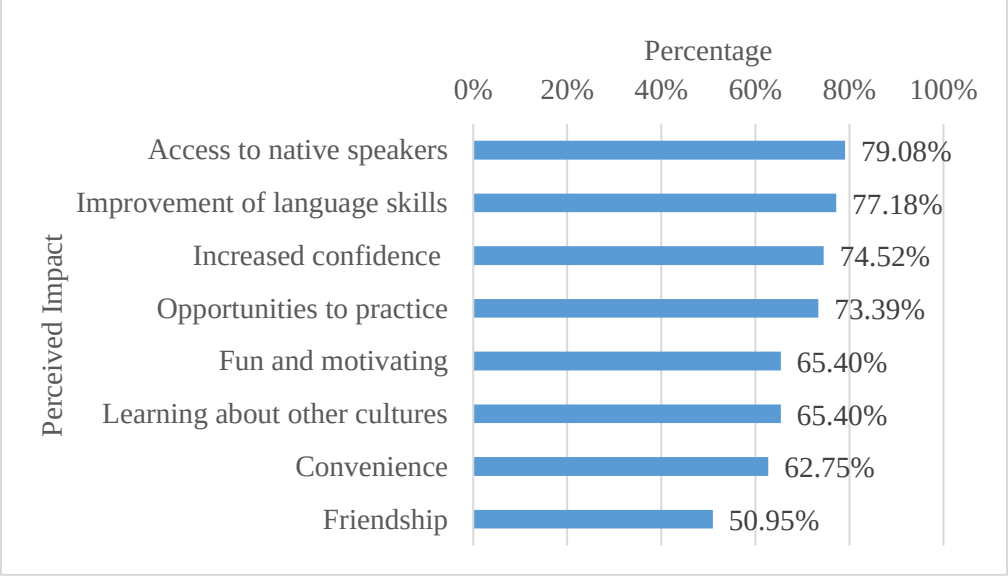

Figure 32. Survey respondents' perceived impact of their Mixxer experience. Percentages were calculated based on the total of 263 responses to this question. Comments in the "Other (please specify below)" option had been coded and incorporated into the chart.

Challenges

Findings from Qualitative Data

The Mixxer language exchange experience was not without challenges, despite the positive effects it had. One interviewee mentioned that it was less likely to find partners for certain language combinations (e.g., German to French exchange). Moreover, it was sometimes hard to identify someone's true motivation for participating in language exchange at the beginning. Like interviewee L4 said: "You know there is a problem. There is a lot of crazy people that they are looking for dating. And it's... is wasting, it's such a waste of time, because you have to answer and then to understand, you know, if [it's] the real stuff or just, just people for dating." Further, even if learners had successfully found a partner, they may be worried about how long the partner was going to last. While some people from the interviews were lucky enough to have long-term language partners, two interviewees mentioned that they had to look for new partners every a few months.

Other than the aforementioned partnership issues, busy schedules and time differences also posed major challenges for people seeking a time that worked for both parties. Unstable Internet connections in various regions also frustrated learners by dropping them offline or failing to start the chat altogether. Another challenge during the exchange process was that certain people spoke too fast in their native language. Consequently, learners of the language at a beginner level found it hard to follow. One of the interviewees, NS5, mentioned that he tried to slow down and use simple words when talking with beginning learners of English. However, not all The Mixxer members were aware of this issue. Another interviewee highlighted that he struggled a little to follow his partners' fast speaking Spanish initially. When his Spanish improved, that was no longer a problem.

Findings from Quantitative Data

Results of survey question 23 revealed the challenges that learners met with when conducting language exchanges at The Mixxer (see Figure 33). Among the 257 responses to question 23, only 8.56% said they had not encountered any challenges to date. The greatest challenge was to schedule a time with language partners and 64.21% respondents selected this item. Almost half of the respondents had issues finding long-term language partners, and 12.84% claimed it was hard to find language partners with their own native language offering. This observation is supported by the high rates of zero language partners reported in Chapter 5 (i.e., 17.42% of all survey respondents had no language partners at all, and 35.86% respondents had no regular partners). Internet connection issues were an obstacle for a surprisingly large amount of people – 44.37% respondents had experienced this problem. Finally, 14.39% respondents had difficulties determining the partner's true motivation for language exchange.

In addition, nine respondents commented in survey question 25 about the usability problem of The Mixxer website interface, especially regarding the chat box that was updated in recent years. Although many users continued their exchanges in other conferencing or messaging tools after they found partners, and, therefore, did not need to interact much with The Mixxer website, a number of learners felt it unpleasant to use the chat tool and other features, which even inhibited their frequent use of The Mixxer.

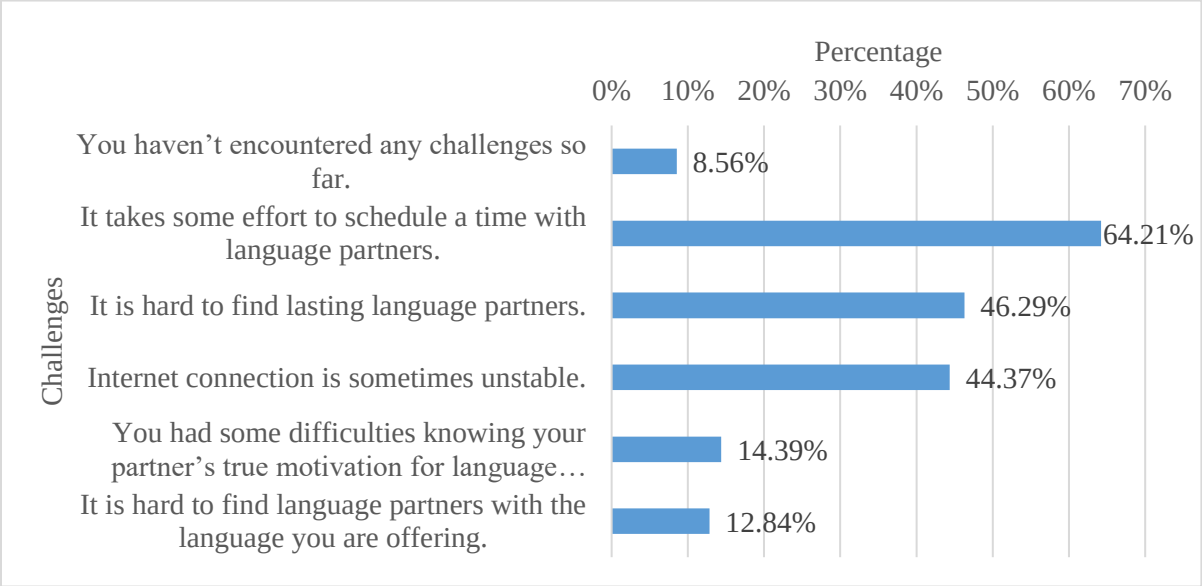

Figure 33. Challenges survey respondents encountered during their language exchanges at The Mixxer. Percentages were calculated based on the total of 257 responses to this question.

Other Learning Efforts

For all learners at The Mixxer, the exchanges may only be part of their language learning experiences. Depicting the other language learning efforts of these self-directed learners helps understand the role that participation in The Mixxer community played in their entire language learning journey.

Findings from Qualitative Data

Only one interviewee reported solely relying on the exchanges for language learning. Others mentioned a variety of language learning efforts other than interacting with The Mixxer partners.

Several interviewees were taking or had taken some formal language classes. A number of them took face-to-face classes while some liked their online lessons with a private tutor. Others opted for a more classic approach and studied with textbooks. Language learning apps, computer programs or other online resources also provided convenient solutions for self-directed learners. Examples of these technology options from the interviews included Rosetta Stone, Duo

Lingo, Quizlet, and many other language learning websites like Learn with Oliver.

Many interviewees tried to immerse themselves in regular language use. They read books, news, or other articles in the target language. They watched movies or online videos. Some people liked listening to music in the target language. Podcasts, radio programs, or audio books were also popular options as audio materials. One of the interviewees even switched the language of all his digital devices into that of the target language. Aside from these language input activities are some language output productions. A variety of people practiced writing on a regular basis, and a few interviewees also tried to speak in person with other people in the language.

Findings from Quantitative Data

Two hundred and seventy respondents reported their other language learning efforts in survey question 24 (see Figure 34). The most popular choices integrated language learning into entertaining activities, including watching movies or online videos (67.78%), reading novels, news, journals, ebooks, or other articles (59.27%), listening to podcasts, radios, audio books, or other audio materials (58.90%), and listening to music (52.21%). Language learning efforts that involved technology were also relatively common for The Mixxer learners. Approximately half of the respondents made use of mobile apps or computer programs designed for language learning or looked for language learning materials online. Being a participant in an online language exchange community might have hinted at their interest in learning languages with technology. Around one-third of the respondents seeking a more immersive direction switched the operation language on their digital devices.

Somewhat less popular were the more traditional language learning strategies, such as studying with textbooks (45.19%), speaking with people offline (42.59%), and regular writing

practice (31.49%). Not as many people took language classes as attending language classes might be more demanding than other options, or access to classes was more limited. Slightly more people attended face-to-face language classes (25.93%) versus those who engaged in online lessons (22.22%). Only 4.45% of respondents did not engage in other efforts for language learning aside from exchanges at The Mixxer.

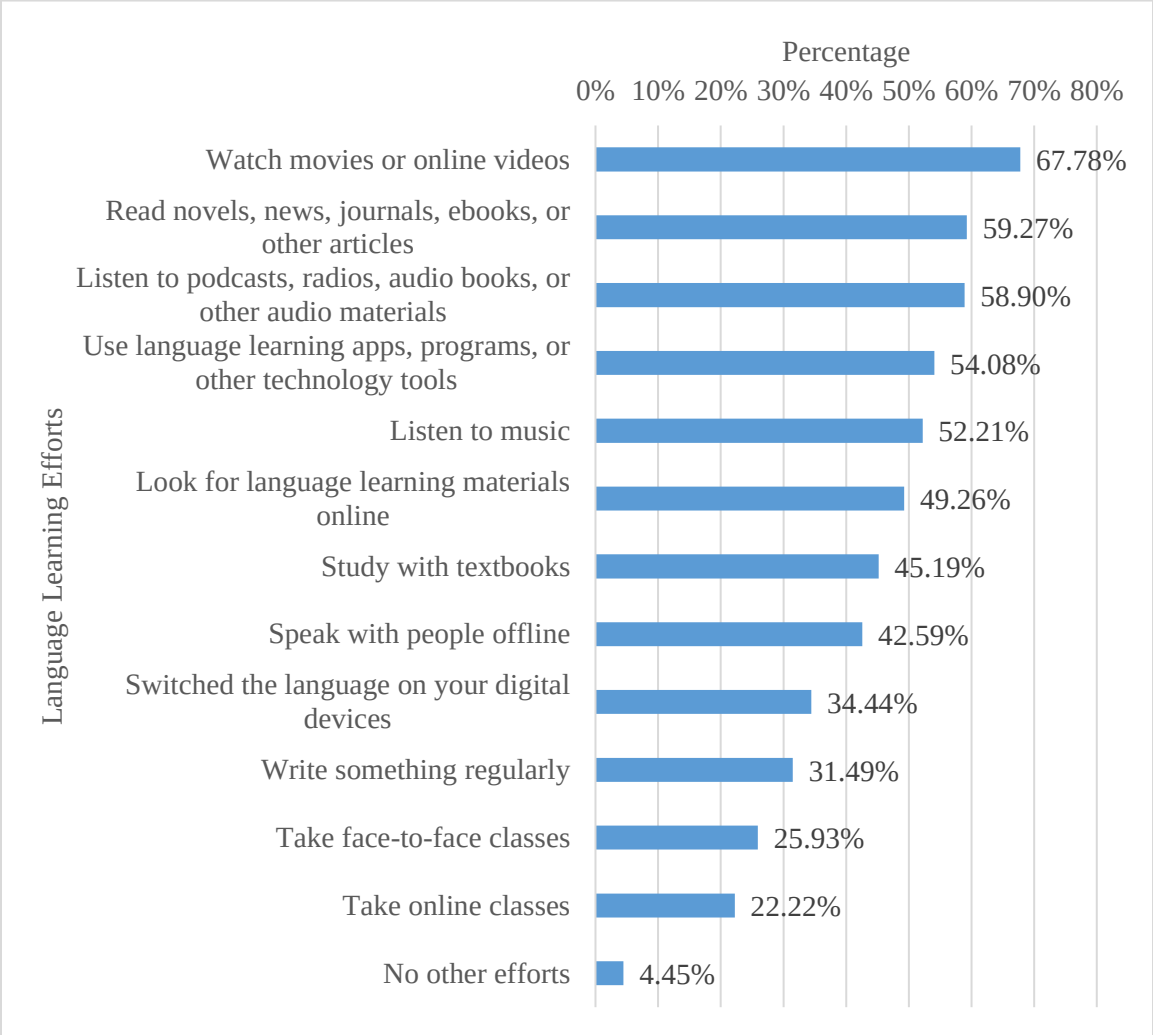

Figure 34. Language learning efforts survey respondents engaged in other than conducting language exchanges at The Mixxer. Percentages were calculated based on the total of 270 responses to this question.

Summary of Chapter 7

This chapter reported the impact that learners perceived from their Mixxer experiences,

along with challenges and other language learning efforts.

When asked about influences that participation in The Mixxer community had on their language learning, interview participants all reported in positive feedback. They acknowledged that the free service of The Mixxer served as a convenient and efficient method for conducting language exchange. They were able to improve their language skills by practicing with native speakers of the language. Some people had more confidence in their language capabilities. Others enjoyed the fun and cultural enrichment of talking with their partners and felt motivated to keep learning the language. Friendship was another exciting accomplishment that various people did not foresee. The survey results confirmed these positive impacts.

However, the language learning journey was not typically without problems. In actuality, most of The Mixxer learners encountered some sort of challenge. The greatest barrier was scheduling time for exchanges with partners given their different time zones and busy personal schedules. Some people experienced intermittent Internet connection problems. Close to half of the people had difficulties finding lasting language partners or even any partners at all for people with less popular language offerings. Knowing the other user's true motivation for language exchange was another concern for a small group of learners.

For the majority of self-directed learners at The Mixxer, language exchanges were only part of their language learning efforts. Learners incorporated language learning into daily entertaining activities, such as watching movies or online videos, reading books, news, or journals, listening to podcasts, radio programs, audio books, and music. Many of them sought help from unique technologies, including language learning mobile apps or computer programs, online language learning materials, and online language classes. A number of individuals even switched the language on their digital devices to the target language. Traditional learning

solutions were popular among a minority of learners, including studying with textbooks, speaking with other people offline, and taking face-to-face classes. Moreover, other individuals engaged in regular writing practices.

In sum, The Mixxer learners found varied ways to receive language input and produce language output. Conducting exchanges at The Mixxer was one efficient and effective choice that enabled consolidation of what was learned through real-world practices.

CHAPTER 8

DISCUSSIONS AND CONCLUSION

This chapter summarizes this dissertation and draws implications for both self-directed language learners and developers of online language exchange communities. Limitations of the study and recommendations for future research are also featured.

Summary of the Study

The present study selected The Mixxer language exchange site as a typical case of online language learning communities, and investigated the details surrounding how learners interacted with each other on this platform with an exploratory sequential mixed methods design. The Mixxer community provided a unique example of how self-directed learning takes place within an informal online language learning context. The application of the SDL and CoI models was also examined.

Research Question 1

The first research question looked into the features of The Mixxer website that supported learner interactions. Two major functions of the website, (1) the profile and search system and (2) the writing correction section, were found to facilitate the major language exchange activities. Users connected with each other based on their native language and language they were learning by setting up a simple profile at The Mixxer and searching for other users. The website did not host communication tools for the exchange. The actual conversational language exchanges took place via Skype or other conferencing or messaging tools. The Mixxer did support written format exchanges by providing the Writing section, where users could all upload their writing samples and have them corrected by native speakers of the language. Additional features of the website, such as Lessons, Blogs, and other information pages, were designed with

suggestions and tips for users' language exchange.

As is discussed in the following, all these features, including design elements (i.e., conversational exchanges and written exchange as the two major tasks) and support elements (i.e., peer collaboration and supporting information from the website), created the learning context for language learners at The Mixxer while shaping their self-directed learning process (Song & Hill, 2007).

Research Question 2

The second research question examined the patterns of interactions among The Mixxer learners. Many The Mixxer users sought partners who had commitment to language exchange and learning and being someone they could truly bond with. The results suggested that only 71.21% learners had successfully conducted language exchange with their Mixxer partners. They typically exchanged with one to four language partners one to four times each month. Each exchange usually lasted 31 to 60 minutes, arranged with approximately equal time allocations for each party to practice the language they were learning.

In language exchange context, like The Mixxer where learners collaborate closely with each other, methods and activities were determined through the negotiation between learning partners. Besides the influence of the learning context, each learner brought with them different personal attributes, such as strategy and resource use along with varying levels of motivation (Song & Hill, 2007) to their collaborative SDL process. Most learners liked to chat casually during the exchange without much preparation. They also asked and answered each other's questions and taught one another some basics of the language in a simple way. They helped partners improve their language skills by correcting their mistakes or providing other feedback during the conversation. Some others had more structured exchange sessions. They prepared

text-based or audio-visual materials to read, listen, or watch with their partners, found exercises to complete together, or engaged in collaborative writing or roleplaying activities. Not too surprisingly, with the unique input of both parties, no two experiences were the same. Even the same learner experienced divergent language exchange processes with different partners. Examples were also identified from the interview data, which showed that people incorporated the learning strategies and resources they learned of from their partners into their future language exchange activities. This demonstrated how learner's involvement in the SDL process could in turn impact their own SDL attributes. The interactive relationship between the learning process, personal attributes, and learning context, as pointed out by Song and Hill (2007), was evident from The Mixxer language learning community.

Research Question 3

The third research question analyzed the social presence, cognitive presence, and teaching presence that underlied the learner interactions. The results indicated there to be a strong social presence within The Mixxer community. Learners established bonds with partners through reciprocal and respectful communication. They made self-disclosures about everyday life, experiences, and interests. Moreover, learners felt encouraged and were more willing to take the risk of making mistakes in front of their partners. The same objective of language learning brought learners the sense of belonging to the community. They engaged in collaborative efforts with partners to learn the language.

Cognitive presence existed among learner's regular language input and output practices. Questions about the language triggered the cognitive inquiry process during the exchange. Further, learners explored the information by working with text-based or audio-visual materials. They achieved integration and resolution during the conversations with partners or in the practice

of writing.

Indicators were identified in the design and organization as well as direct instruction categories of teaching presence. The Mixxer users organized their exchange time collaboratively with partners, and designed different activities to enrich their exchange experiences. Direct instruction was offered during the conversations when the native speaker role explained or corrected language. Direct instruction was also evident from the writing corrections on The Mixxer website. Another small proportion of teaching presence was apparent by the website and its administrator in the format of responding to technical issues and offering suggestions for learner's exchange activities. The Mixxer website created the foundational structure for the self-directed language learning process. Meanwhile the learners themselves took full control of the actual tasks and resources that constituted the design elements of this learning context. In this informal online setting where learners performed the teacher's role, learners' SDL attributes not only impacted the learning process, but also largely modified the learning context.

Furthermore, different levels of involvement in the design and organization activities was observed from both the qualitative and quantitative data. Learners' motivation, self-efficacy beliefs, time management, and past experiences in self-directed online language learning were identified from interview records as influencing factors for such observed variance. From Shea and Bidjerano's (2012) perspective, these factors are among the primary components of learning presence (i.e., self-regulated learning skills), which can be viewed as a moderator for the other three presences in the CoI model. In the formal online learning context that Shea and Bidjerano (2010, 2012) investigated, learning presence exhibited a large impact on cognitive presence when social and teaching presences were minimally present. While in the informal self-directed online language learning context found at The Mixxer, learning presence also demonstrated its

influence on the level of teaching presence within the micro-learning environment between each pair of partners.

A synthesized model. As the discussion has uncovered here, the SDL conceptual model from Song and Hill (2007) and the CoI framework, proposed by Garrison and colleagues (Garrison, 2007; Garrison et al., 2000) and enhanced by Shea and Bidjerano (2010, 2012), find their intersections.

Learning presence corresponds to the personal attributes dimension. As mentioned earlier, learning presence becomes more salient in settings where teaching and social presence are at low levels; that is, settings with high levels of self-directedness (i.e., self-directed learning). Learning presence should be included in the CoI framework, just as personal attributes constitutes a crucial aspect in Song and Hill's (2007) SDL model. Cognitive presence of CoI is reflected in the learning processes and outcomes of SDL, whereas teaching presence involves the design and support elements of the SDL learning context, and the learning process of planning, monitoring, and evaluating. The only CoI component missing from the SDL model of Song and Hill (2007) is social presence owing to the fact that they were attempting to explain SDL experiences from an individual learner's perspective without considering interactions among community members.

When these two frameworks are synthesized together (see Figure 35), they provide a more comprehensive explanation of the learning experiences occurring within an informal online community of self-directed learners. In comparison to Song and Hill's (2007) SDL model, this new model incorporates the social presence construct from CoI as a third element in the learning context dimension. Such a component is important as a social atmosphere helps establish the sense of belonging in the online community, influences learners' motivations, and affects the

discourses taking place within the online community, just as was observed with The Mixxer learners. Social presence is an essential aspect of the learning context for self-directed learners.

The learning context of the synthesized model also possesses more components from the CoI teaching presence, including facilitation of discussion and scaffolding as support elements. In addition, the learning process of SDL takes into account both meta-cognitive planning, monitoring, and evaluation, and the cognitive development of learners in terms of triggering events, explorations, constructions, and resolutions. Song and Hill (2007) seem to consider cognitive development as the learning outcome that learners achieve at the end of the SDL process. In contrast, Garrison and his colleagues' CoI framework suggests that a complex process may also be involved during development, especially when the type of learning is more inquiry-oriented.

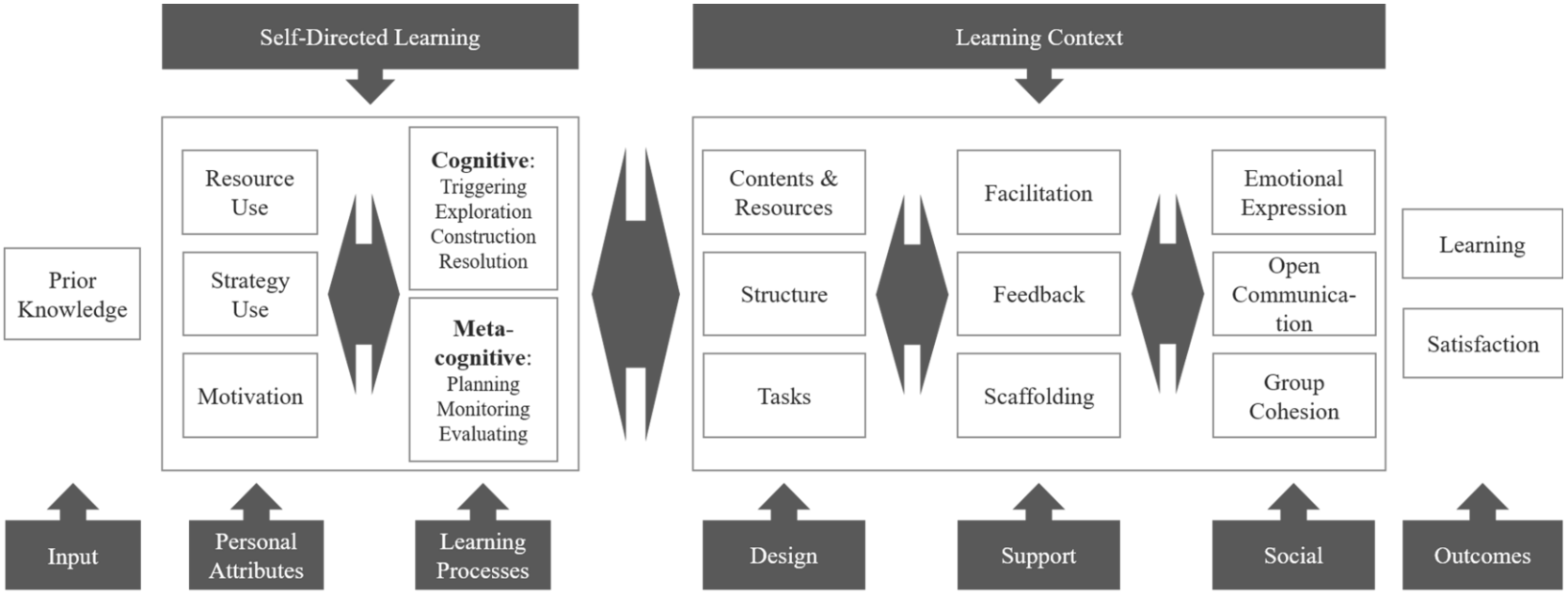

Figure 35. Synthesized model for understanding self-directed learning in informal online communities.

Research Question 4

The last research question enquired about the perceived influence of The Mixxer experience on users' language learning. Participants acknowledged the convenience of online language exchanges. They appreciated the opportunities to practice the language with native speakers and were able to see some improvement of their own language skills. Exchanges were fun and motivating for many people. It also expanded learners' language learning to a cultural experience, similar to Reese's (2007) observation in an online text-based game environment. In The Mixxer community, the cultural exchange became a significant part of their conversation, and contributed to the establishment of friendship between partners. Yet, in addition to all these positive impacts, learners encountered certain challenges during the process, such as time-scheduling issues, unstable Internet connections, and difficulties finding a partner.

Learners also made other efforts related to their language learning apart from language exchanges at The Mixxer. They exposed themselves to the target language in daily entertainment activities and utilized language learning technologies. A number of individuals attempted to study on their own with textbooks or enroll in a language class. Conducting language exchanges was one of the language learning methods that allowed learners to receive authentic language input and practice language output with feedback.

A summary of the primary findings of the present study is presented in Table 17.

Table 17
Summary of Dissertation's Key Findings

Features that supported interactions
• The profile system at The Mixxer provided a platform to connect language learners and native speakers of different languages from all over the world. It defined the structure of learners' interactions.
• The Mixxer did not host audio- or video-based conversational exchanges, but suggested Skype as an alternative tool for learners. The Mixxer provided a writing section that supported learners' interactions in written format. The conversational

exchanges and exchanges of writings constituted the major learning tasks at the Mixxer. • Feedback that learners receive from peers and related information from the website provided learning support in this self-directed language learning context.
Exchange activities • Casual chat • Ask and answer each other's questions about the language • Teach each other basics of the language (words, grammar rules, pronunciation, etc.) • Translate each other's words into the other language • Say sentences twice in both languages • Review materials together (e.g., YouTube videos, articles, etc.) • Complete language exercises • Help each other practice for a language test • Engage in collaborative writing • Teach each other languages in a way similar to formal lessons • Create scenarios and engage in roleplaying to practice the language
Perceived impacts on learning • Access to native speakers • Improvement of language skills • Increased confidence in one's language competencies • Opportunities to practice the language • Bringing enjoyment and motivation to language learning • Learning about other cultures • Convenience of conducting language exchanges online • Friendship
Language exchange challenges • Time-scheduling issues arise when attempting to arrange exchanges • Difficulty in finding language partners, especially lasting partners • Unstable Internet connections • Difficulty in knowing partner's true motivation for language exchange
Community of Inquiry presences • Strong social presence within The Mixxer community • Teaching presence was observed with learners taking primary responsibility for design, organization, and direct instruction. • Evidence for learning presence was identified in terms of motivation, strategy and resource use, and self-efficacy beliefs.
Self-directed learning • In the highly collaborative language exchange context at The Mixxer, learning methods and activities were determined through the negotiation between partners. • Besides the influence of the learning context, each learner brought different personal attributes, such as strategy and resource use along with varying levels of motivation (Song & Hill, 2007) to their collaborative SDL process. • Improvement to Song and Hill's (2007) SDL model was proposed by incorporating CoI components.

Implications

One of the big challenges for The Mixxer learners was the difficulty in finding a language partner, especially lasting ones. Several factors were found related to the discontinued partnership: time zone and schedule issues, mismatched motives of conducting language exchanges, major discrepancies in proficiency levels in the target languages, decrease of personal motivation in language learning, and life changes. There were other factors that contributed to successful long-term language partnership: structure and activities that both parties enjoyed, topics in common to converse about, and friendship. Both self-directed language learners and designers/developers of online language learning communities may find resonance with these implications from the findings of this dissertation. The following suggestions are made based on the synthesized SDL model for informal online communities described in the previous section.

Implications for Learners

In order to find a reliable language partner, learners may consider looking for someone with a similar proficiency level in the target language as themselves, so that they may feel more connected and there may be a smaller probability of one proficient language dominating their conversation. Some learners attempted to find partners who had retired or joined The Mixxer for at least a certain period of time. Those are effective strategies for finding partners with a strong commitment to language exchange and learning. The key takeaway for learners is to have a partner whose level of commitment to language exchange matches their own. Others had a strong preference of exchange structures and chose to state the preference in their user profile, which helped other learners decide whether or not to partner with this person, and in turn increased the likelihood of finding a suitable partner.

The design of the learning context largely impacts learners' experiences during the SDL

process (Song & Hill, 2007). In an environment with higher levels of self-directedness, learners can have their own input in terms of the design of the learning structure, tasks, resources, and contents. The subsequent structure and activity ideas from The Mixxer participants may give learners inspiration regarding how to make their language exchanges more creative and meaningful:

- Watching an online video together (e.g., a song in the target language, an introduction of some cultural phenomenon);
- Reading an online article (e.g., a local news report, a story);
- Listening to a podcast program (e.g., an interesting dialogue);
- Completing language exercises;
- Creating relevant scenarios and having roleplaying conversations;
- Engaging in collaborative story writing in Google Docs or other tools;
- Practicing mock-up presentations based on real-world tasks the learner may perform in the target language (e.g., a teacher demonstrating a short history lesson session he is going to teach in English)

For self-directed language learners, engaging in online language exchanges could be a low-cost, efficient, and effective option to garner access to native speakers and practice the language in a real-world setting. However, solely relying on the exchanges to master a language might not work well depending on one's objective of language learning. As two survey respondents commented, language exchanges alone were not sufficient. It could serve as a consolidation of previous learning or an enrichment of the whole language learning journey.

Implications for Designers and Developers

To assist learners during the process of establishing language partnership and setting up

exchanges, designers and developers of online communities could consider the following features:

Creating a focused language learning atmosphere. Language exchange website are in some sense a social networking site. Many language learners in the present study mentioned uncomfortable experiences of coming across people who are seeking romantic relationships. To help maintain a focused language learning atmosphere within the community, a website could stress ground rules on the homepage or some other easy-to-access locations, and take appropriate monitoring measures (e.g., simple rules stated in the introduction text and the report abuse function on The Mixxer website). As Garrison and his colleagues noted, a focused language learning atmosphere enhances the sense of group cohesion within the community (Garrison, 2007; Garrison et al., 2000).

Including more relevant information such as proficiency level in user profile. Cases were reported wherein the conversation between two partners ended up being dominated by one language if one person was much more proficient in the language he/she was learning than his/her partner was in the other target language, or wherein a novice learner could barely speak in the target language and conversation was hard to carry on. If information about proficiency level, preferred exchange structure, etc. is provided in some way (e.g., a proficiency level filter in the profile searching system, an entry in each user's profile), learners will be able to match with a partner at a similar stage of language learning with better chances for a balanced conversation.

Assisting learners when they have difficulties finding a partner. When learners failed to find someone to start language exchanges after a few trials, the website can offer some necessary assistance. The Mixxer website had several webmaster blog posts with useful tips

about how to find a language partner and successfully conduct language exchanges. However, these posts are on the second and third pages of the webmaster blog which only a very small proportion of users would visit, and thus require quite some effort for users to find. Inactive The Mixxer users also received monthly emails with a link to suggested partners based on their native language and target language. Such emails may be able to retain inactive users, but did not help active users with partner difficulties.

Assistance for finding language partners could become more accessible by identifying learners who have encountered this problem in a more accurate way. A simple method is to provide a link stating "I cannot find a partner" or similar words for learners to click on. Tips and suggestions can then be sent to this group of users directly. It might also be helpful if every user can display a status about whether or not he/she is currently accepting new partners, so that new users can target their invitations to the right group of individuals instead of receiving no responses to their messages.

Providing ideas and suggestions for exchange activities. The findings for research question 2 showed that The Mixxer language learners were mostly engaging in casual chats, asking and answering questions, teaching some language basics, and correcting each other's errors, which can easily become tedious if they do not find conversation topics or contents that both feel interested in. One survey respondent commented in the challenge question that "it's hard to find something to talk about" during the exchange. In some cases, learners tried to find the "right" person with whom they have ideas in common to discuss. In fact, adopting some other creative activities, as mentioned earlier, can provide more enjoyment to the language exchange, effectively facilitate their language learning, and perhaps help the partnership last longer. In the public space of the learning community, simple activity ideas that are suitable for

informal self-directed language learning can be supplied, or learners can be invited to share their ideas or successful experiences. Such suggestions could offer more structure and tasks to the design of the learning context for those self-directed learners who need them.

Embedding scheduling tools to help learners set up time for exchange. Time scheduling issues are the top challenge for The Mixxer learners. Typically, people message each other back and forth to schedule their exchange time. Different time zones and busy personal schedules are the two common factors learners need to consider. Many scheduling tools (e.g., Doodle) are available on the Internet that may make learners' scheduling processes a little smoother. The language exchange platform can embed the tool on the website or simply recommend them to users.

Offering simple training for users regarding how to be a more helpful language partner. Not everyone is born to be a good teacher. Some participants reported that sometimes, people spoke too fast in their native language and it became difficult for beginning learners to follow. The Mixxer learners also demonstrated different levels of design, organization, and direct instruction behaviors during exchanges. Short training of necessary language instructional strategies, such as modified language input and identifying partner's learning needs, can be offered on the platform to aid everyone in becoming a more helpful language partner.

Incorporating mechanisms that motivate continued participation. For certain people, language exchange itself is a motivating factor that drives them to continue language learning. For others, some sort of external stimulus might help them be more persistent in their participation within the learning community. The platform could offer optional notifications or reminders for users to opt in. There could be a daily/weekly/monthly check-in system or means to record user's different types of contribution. Moreover, users could be awarded badges,

points, or other abstract incentives for their activeness or contributions they make. For example, The Mixxer users earn points for their writing corrections.

The incentives work better if they are more meaningful from a learner's perspective. For instance, the points users earn could be used to unlock additional content, features, or services. Or, it could be in the format of recording learning progress that helps learners feel they are achieving.

Table 18 lists the implications of the present study for both self-directed learners engaging in online language exchange and designers of online language exchange platforms.

Table 18
Summary of Implications for Learners and Designers

Implications for Learners
Suggestions for partnership: • Look for partners whose level of commitment to language exchange matches your own • Communicate your expectations of language exchange with your partners ***Suggestions for exchange activities***: • Watch an online video together (e.g., a song in the target language, an introduction of cultural phenomenon) • Read an online article (e.g., a local news report, a story) and discuss • Listen to a podcast program (e.g., an interesting dialogue) and discuss • Practice with language exercises and provide feedback to each other • Create relevant scenarios and have roleplaying conversations • Engage in collaborative story writing in Google Docs or other tools • Have mock-up presentations based on real-world tasks which you may perform in the target language (e.g., a teacher demonstrating a short history lesson session that he is going to teach in English)
Implications for Designers
• Create a focused language learning atmosphere • Include more relevant information, such as proficiency level in user profile • Assist learners when they have difficulties finding a partner • Provide ideas and suggestions for exchange activities • Embed scheduling tools to help learners set up times for exchange • Offer simple training for users regarding how to be a more helpful language partner (e.g., modified language input, identifying their partner's learning needs) • Incorporate mechanisms that motivate continued participation

Limitations

The present study mainly relied on the self-reported data from interview and survey participants to investigate the language exchange process. Such reliance on self-reported data could possibly affect the accuracy of conclusions about the interaction patterns and CoI presences. The credibility of the study will be enhanced if direct observation of language partners' audio or video exchange sessions could be performed.

Participants in interviews were either English learners or native speakers of English. The other non-English related members within The Mixxer population, although a relatively small group, were not included in the interviews. This posed a potential sampling bias for the interview process.

The survey data showed there to be a slight sampling bias regarding the native language distributions of survey respondents. However, based on the fact that categories in the native language variable were not mutually exclusive, the researcher was not able to perform weighting of survey data based on this variable. Data for other demographic variables, such as respondents' country, gender, and age, were not available from The Mixxer population. As a result, it remains unknown whether the study had other sources of sampling bias.

In addition, respondents' completion rates for the survey was not ideal. More than 150 individuals stopped filling out the survey after answering just a few questions. Therefore, only 396 of the 563 responses were included in analysis. Moreover, 114 respondents who selected "You have not conducted any exchange yet" in question 11 were directed to the end of survey without access to the subsequent questions. As such, a few key questions, including those about exchange structure, preparation, and perceived impact, received less than 300 responses. The inadequate responses for key questions, on the one hand, reflected the fact that a significant

portion of respondents had difficulties starting language exchanges at The Mixxer. On the other hand, non-response error was revealed in the present study. The low completion rate could be improved by allowing "no exchange yet" respondents to answer more questions, such as regarding challenges they encountered and their partner preferences or by sending a reminder to people who left the survey in progress.

Lastly, some degree of measurement error and construct validity problems were observed in this study, as discussed in Chapter 6. Survey questions that measured CoI presences need to be revised. A consistent rating scale should also be adopted, so that each presence can be analyzed more precisely with an overall mean score and standard deviation. Such survey design flaws could be eliminated or reduced by consulting with an expert on the CoI framework and conducting a pilot test with an approximate sample during the survey design process.

Recommendations for Future Research

Future research can repeat the study of The Mixxer language learning community with a different research design or methods, for example, ethnographic research as a participant in the community or data collection through participatory or non-participatory observation.

Similar studies can be conducted on other language exchange platforms to discover how varying designs of language exchange mechanisms affect the way people interact with their language partners. Investigations of interaction patterns in other types of online language learning communities for self-directed language learners may produce interesting results, as well – learners are not connected as pairs of partners and their communication may be in a more public or multi-directional manner instead of the one-on-one chats between The Mixxer learners.

In the present work, The Mixxer learners demonstrated different levels of design and organization with respect to their exchange activities. It would be interesting to examine the

relationship between the teaching presence in the language learning community and learner's self-directed learning indicators, namely self-management, self-monitoring, and motivation (Garrison, 1997). In fact, some CoI researchers had recently completed an unpublished study on meta-cognition (related to the self-monitoring construct) within collaborative learning environments, according to The Community of Inquiry website (Garrison, Cleveland-Innes, & Vaughan, n.d.). How interaction patterns is related to SDL factors, learning achievements, or other constructs can also be investigated.

The present study implemented the CoI theoretical framework in the analysis of an informal self-directed online language learning community. The results showed the applicability of the CoI framework in such a context. New indicators and examples were discovered for each presence, calling for a new survey instrument to assess CoI in this specific context. The original CoI survey (Arbaugh, Cleveland-Innes, Diaz, Garrison, Ice, Richardson, Shea, & Swan, 2008) was developed for inquiry-based learning environments where an instructor role was present and, therefore, was not applicable to self-directed language learners at The Mixxer. When designing instruments for informal learning communities with a high level of self-directedness, researchers needed to remove the description related to a course, and avoid the role of an instructor for the teaching presence items. The development of social presence items may need to take into consideration the characteristics of learner communication. For instance, intensive one-on-one communication in The Mixxer case. Finally, items of cognitive presence should be modified according to the type of learning content. Taking language learning for example, cognitive items should be about learning, internalizing, and applying language knowledge, instead of inquiry-related problem solving.

Conclusion

This dissertation presented a unique self-directed online language learning community at The Mixxer where every learner is a newcomer to one or more language(s), and, at the same time, a master of at least one other language. There was no defined teacher role in The Mixxer community. Newcomers to The Mixxer attempted to improve their language knowledge and skills through legitimate peripheral participation with masters of the language in this community of practice. With this, The Mixxer case offered interesting findings to help understand the learning experiences in an informal online environment with a high level of self-directedness.

Importantly, the social, cognitive, teaching, and learning presences of a Community of Inquiry were observed and recorded at The Mixxer. The interactive relationships between learning context, learners' SDL attributes, and SDL processes were exemplified. In effect, many factors can influence a self-directed learner's language learning experience. Despite the complexity, informal self-directed online learning is fast becoming a prevalent option for learning in this current digital era. Much remains open for researchers, educators, and designers to explore, discover, and implement in such environments. In the end, there is a pressing need to create more effective, efficient, and smoother self-directed online learning experiences for all life-long learners. Much headway in this regard is likely to be made in the coming decade. As such, I hope that this dissertation research can inform those who will be players in it, be they language learners, researchers, educators, vendors, policy makers, or other stakeholders.

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Appendix A

Interview Protocol for Website Administrator

Guiding Questions:

1. What is the primary purpose of The Mixxer?
2. How was The Mixxer started? What were your major considerations when designing the website?
3. How do users interact with each other at The Mixxer website? How does the website support their interactions?
4. Can you provide some basic demographic information about the user population?

Appendix B

Interview Protocol for Language Learners

Guiding Questions:

1. Can you introduce yourself briefly? (age range, occupation, etc.)
2. What is your native language? What is the language that you are learning at The Mixxer?
3. Why are you learning this language (English)?
4. How long have you become a member of The Mixxer?
5. Have you found any language partner(s) at The Mixxer? And how many?
6. How do you interact with your language partner? Can you describe a typical Skype chat between you and your language partner? (How long, how frequently, what do you do, any teaching behavior, error correction behavior)
7. Which parts of The Mixxer website do you use regularly (Inbox, My Friends, Lessons, Writing, Blog, Events)?
8. How do you think The Mixxer has influenced your language learning?
9. How would you rate your own proficiency level of the language before using The Mixxer? and now?
10. Do you have any preferences or criteria when looking for language partners at The Mixxer?

11. Besides using The Mixxer, are you doing other things to learn English?

Appendix C

Survey of language exchange experiences at The Mixxer

[Informed consent page]

Questions with * were designed to request answer.

1. How old are you?
    a. 17 or younger – to end of survey.
    b. 18 to 29
    c. 30 to 39
    d. 40 to 49
    e. 50 to 59
    f. 60 to 69
    g. 70 or older
2. What is your gender?
    a. Man
    b. Woman
    c. Other
3. What is your occupation?

    _____

4. Which country are you from (i.e. your citizenship)?

    _____

5. *What is your native language(s)?

    _____

6. *What language(s) are you learning at The Mixxer?

_____

7. Why are you learning the language(s)? (Select all that apply.)
    a. You feel fulfilled or enriched after learning the language.
    b. You have moved to a place where the language is spoken.
    c. You have family members or relatives who speak the language.
    d. You like the language.
    e. You are interested in languages.
    f. You want to learn about the culture behind this language.
    g. You want to meet more people by speaking this language.
    h. You are likely to travel to places where the language is spoken.
    i. It is required by your current or future academic program to learn the language.
    j. Language learning is your hobby.
    k. Learning the language is helpful for your job or career.
    l. Other (Please specify below): _____
8. About how long have you been using The Mixxer?

    0, 1, 2 ... 12 *(dropdown)* Year(s) 0, 1, 2 … 12 *(dropdown)* Month(s)
9. About how many Mixxer language partners have you had in total?

    0, 1, 2, 3, 4 … 19, 20, more than 20 *(dropdown)*
10. About how many Mixxer partners do you have regular language exchanges with?

    0, 1, 2, 3, 4 … 19, 20, more than 20 *(dropdown)*
11. *About how often do you exchange with your Mixxer language partners on average?
    a. You have not conducted language exchanges yet. *(– to end of survey if a is selected)*

b. 1 or 2 exchanges each month

c. 1 or 2 exchanges each week

d. 3 or 4 exchanges each week

e. More than 4 exchanges each week

12. Which tool do you use for language exchange? (Select all that apply.)

a. Facebook Messenger

b. FaceTime

c. Skype

d. WhatsApp

e. Zoom

f. Other (Please specify below): _____

13. About how long is each exchange on average?

a. 0 – 30 minutes

b. 30 – 60 minutes

c. 61 – 90 minutes

d. 91 – 120 minutes

e. More than 120 minutes

14. *How do you arrange the time for the two (or more) languages you and your partner are learning? (Select all that apply.)

a. You divide the time into approximately equal parts for each language during the exchange.

b. You arrange for some time for one language and the rest of the time for the other language (not equal length of time).

c. One person speaks in one language, and then you switch the side and language after the person finishes.
d. You go back and forth in both languages.
e. Other ways (Please specify below): _____

15. *About how often do you and your partner do the following during your language exchanges? (Select from Never, Sometimes, Often, Always)

Activities

a. You chat casually.
b. You go through materials together (YouTube videos, articles, etc.)
c. You translate each other's words into the other language.
d. You say something twice in both languages.
e. You create scenarios and do role-play to practice the language.
f. You engage in collaborative writing.
g. You ask and answer each other's questions about the language.
h. You teach each other some basics of the language (words, grammar rules, pronunciation, etc.)

Formal learning and teaching

i. You help each other practice for language test.
j. You do language exercises.
k. You teach each other languages in a way similar to formal lessons.

Feedback

l. You correct each other's mistakes. (– Show Q16 if participant selects sometimes, often, or always for this item)

m. You give each other feedback about how you are doing with the language.

16. (Show this question if participant selects sometimes, often, or always for item l in Q15) How do you and your language partner correct each other's mistakes? (Select all that apply.)

When do you correct?

a. Interrupt immediately while one is talking

b. Type in the chat window while one is talking

c. Tell the other person when he/she pauses during the conversation

d. Tell each other at the end of the conversation

What do you correct?

e. You correct every single mistake that can be found.

f. You correct the major mistakes and ignores the minor ones.

g. You correct grammar mistakes.

h. You correct pronunciation mistakes.

i. You correct vocabulary mistakes.

17. *As you prepare for the exchange, about how often do you do the following? (Select from Never, Sometimes, Often, Always)

a. Create an agenda or things to do for the coming exchange.

b. Get to know each other's goals and/or preferred ways of language learning.

c. Prepare audio-visual materials (podcasts, radio programs, YouTube videos, etc.)

d. Prepare exercises for you or your partner to do.

e. Read or prepare text-based materials (articles, News, textbooks, etc.)

f. Think about topics or subjects to talk about.

g. Write down questions to ask the language partner.

h. Write down words or phrases to use in the conversation.

18. *What are the topics that you and your language partner(s) chat about? (Select all that apply.)

a. Books

b. Countries or places

c. Cultures

d. Everyday life

e. Family

f. Food

g. Hobbies

h. Holidays

i. Job

j. Jokes

k. Language learning tips

l. Movies

m. Music

n. News

o. Politics

p. Recent activities

q. Sports

r. Travel/trips

s. Weather

t. Other (Please specify below): _____

19. *In your relationship with your language partners, about how often are the following true? (Select from Never, Sometimes, Often, Always)
    a. You find our communication reciprocal and respectful.
    b. You feel comfortable to express personal feelings in your conversations.
    c. You feel that your language partner is supportive for your language learning.
    d. You find yourself sharing some similarities with your language partner(s).
    e. You have a sense of belonging to this language exchange community.
    f. You become good friends with each other.
20. What other parts of The Mixxer Website do you use besides looking for and contacting language partners? (Select all that apply.)
    a. You don't use other parts of The Mixxer Website.
    b. Blog
    c. Events (language exchange with classes at Dickinson College or other institutions)
    d. Lessons
    e. My Friends
    f. Writing correction
21. What do you look for in a language partner? (Select all that apply.)
    a. You don't have any preferences when looking for language partners.
    b. Someone at a certain age range.
    c. Someone in your gender.
    d. Someone of a different gender.

e. Someone who has joined The Mixxer for a certain length of time.

f. Someone who can commit regular time for language exchange.

g. Someone who agrees to your desired format of language exchange.

h. Someone you can relate to personally.

i. Other (Please specify below): _____

22. *How do you think your Mixxer experience has influenced your language learning? (Select all that apply.)

a. You have gained more confidence in your language capabilities through the exchange.

b. Exchange with language partners brings fun to your language learning, or motivates you to continue learning the language.

c. Language exchange has helped improve your language skills.

d. Language exchange enables you to learn about other cultures.

e. Language exchange provides you access to native speakers of the language.

f. Language exchange provides you the opportunities to practice the language skills.

g. You made good friends with language partners after the exchange.

h. It is convenient to do language exchange online.

i. Other (Please specify below): _____

23. What are the challenges that you encountered in your language exchange? (Select all that apply.)

a. You haven't encountered any challenges so far.

b. It takes some effort to schedule a time with language partners.

c. Internet connection is sometimes unstable.

d. You had some difficulties knowing your partner's true motivation for language exchange.
e. It is hard to find lasting language partners.
f. It is hard to find language partners with the language you are offering.
g. Other (Please specify below): _____

24. What other things do you do for language learning besides using The Mixxer? (Select all that apply.)
    a. You don't do other things. Language exchange at The Mixxer is your primary way of language learning.
    b. You take face-to-face language classes/lessons.
    c. You take online language classes/lessons.
    d. You study with a textbook.
    e. You use language learning apps, programs, or other technology tools (Duolingo, Rosetta Stone, Quizlet, online dictionary, etc.).
    f. You look for language learning materials online (grammar explanations, reading or listening exercises, etc.).
    g. You listen to music in the language that you are learning.
    h. You listen to podcasts, radios, audio books, or other audio materials in the language that you are learning.
    i. You read novels, news, journals, or other articles in the language that you are learning.
    j. You watch movies/films or online videos in the language that you are learning.
    k. You write something regularly in the language that you are learning.

l. You try to speak with people in the language in your offline life.

m. You switched the language on your computer, cellphone, or other devices to the language that you are learning.

n. Other (Please specify below): _____

25. Do you have other comments about your language learning experience at The Mixxer? Please type in the box below.

_____